Roy F. Weston, Inc.
Suite 400
3 Hawthorn Parkway
Vernon Hills, Illinois 60061-1450
708-918-4000 • Fax 708-918-4055

23 November 1994

Ms. Jan Pels (HSM-5J)
Work Assignment Manager
U.S. Environmental Protection Agency
77 W. Jackson Blvd.
Chicago, IL 60604

U.S. EPA Contract No.: 68-W8-0089
Work Assignment No.: 48-5JZZ
Document Control No.: 4500-48-AKCD

Subject: Focused Site Screening Inspection Prioritization Report
Conservation Chemical Company (CERCLIS ID No. IND040888992)

Dear Ms. Pels:

Roy F. Weston, Inc. (WESTON®) is transmitting the attached FSIP report for the Conservation Chemical Company that could be made available to the general public.

If you have any questions, please call.

Very truly yours,

ROY F. WESTON, INC.

Steven R Brooks

FOR James M. Burton, P.E.
Site Manager

JMB:ktc

cc: Ms. P. Vogtman, Project Officer, U.S. EPA (letter only)
Mr. H. Atkinson, IDEM

CH01\PUBLIC\WO\ARCS\040\16025.LTR 4500-48-AKCD

137

☒ Minor ☐ Significant ☐ Severe

INDIANA STATE BOARD OF HEALTH
ENVIRONMENTAL EMERGENCY RESPONSE TEAM

INCIDENT REPORTING LOG

Incident # 860147 — LAKE —

Date: 1-17-86 Time: 4:30 PM Receiver: MARK MAUCK

Caller: NORMAN Hjersted Title: President

Organization: CONSERVATION Chemical of Illinois Phone: 913-262-3649

Responsible Party: MR. ANDERSON ? boss ? Address: 6506 INDUSTRIAL Hwy Phone:

City/County: GARY, IN 46406

Name of Shipper: Letter corr. Address: 5201 Johnson Dr Phone:

Name of Carrier: Address: Mission, Kansas 66205 Phone:

Name of Manufacturer: Address: Phone:

Origin: Destination:

Emergency Type: ☒ 1 Spill ☐ 2 Fish Kill - # of Fish ☐ 3 Radiation ☐ 4 Air Release (contaminants) ☒ 5 Hazardous Materials ??

Date/Time of Incident: 10-?-85 Is Fire Involved? ☐ yes ☒ no Area affected 15000 ft² 300' x 50' guess

Placard Information: Shipping Papers Available: ☐ yes ☐ no

Source: ☐ 1 Trans. RR ☐ 3 Trans. Pipeline ☒ 5 Industrial ☐ 7 Commercial ☐ 9 Municipal STP ☐ 11 Other
☐ 2 Trans. Truck ☐ 4 Trans. Barge ☐ 6 Agricultural ☐ 8 Semi-Public ☐ 10 Unknown ☐ 12 Individual

Material: ☒ 1 Petroleum Prod. ☐ 3 Misc. Chemical ☐ 5 Ag. Related Prod. ☐ 7 Other
☐ 2 Acid/Base ☐ 4 Misc. Material ☐ 6 Food Prod. ☐ 8 Unknown

	Product	Phase	Quantity Gal/lb
1.	KEROSENE	☐ G ☒ L ☐ S	UNK
2.	Poss. Cont. W/ PCB/USED for Cleaning Eqt.	☐ G ☐ L ☐ S	

Proximity of Water: ☐ Lake ☐ Stream ☐ Well ☐ Ditch ☐ Sewer

If near water, give name and distance from incident: - None - 1-2 miles away from w/w

Type of Leak: ☐ Rupture ☐ Fracture ☐ Valve ☐ Overfill ☐ Other: INT. Disch. for Cleaning

Current Situation: Leak is: ☐ Continuing ☒ Stopped ☐ Contained ☐ Cleaned Up

Location:

Directions to Site: WEST of GARY Airport
6500 INDUSTRIAL Hyway

Circumstances: ☐ 1 Equipment Failure ☐ 3 Employee error ☒ 5 Intentional Discharge ☐ 7 Unknown
☐ 2 Transportation Accident ☐ 4 Vandalism ☐ 6 Misc.

Notes

An Organic heavy fuel oil which turns solid at room temp. was contaminated A Cincinn. based Cleanup contractor came in Oct 85 to clean up. Stopped in Dec because of winter & cleaned Equipment w/ Kerosene & left on ground. EPA has been informed / All was quiet & it halted & Tanks nearly

Type/Area: ☐ Residential ☐ Commercial ■ Industrial ☐ Rural Population: _____

Have residents been: ☐ Alerted ☐ Evacuated If evacuated, how far downwind: _____

Have there been any casualties? ☐ yes ☐ no Remarks: _____

Weather: Wind Direction _____ Wind Speed _____ Temperature _____

Other Comments: _____

Professional Persons Presently at Scene: ☐ U.S. EPA ☐ State Police ☐ Sheriff ☐ Fire Department ☐ EMT
■ Company Representative ☐ Conservation Officer Other: _____

Investigated By: ■ 1 IEERT ☐ 3 Conservation Officer ☐ 5 EPA ☐ 7 IEERT Field Investigation
☐ 2 Other Board Personnel ☐ 4 County Health Dept. ☐ 6 Other _____

CHEM./PHYSICAL CHARACTERISTICS

Color _____ Vapor Density _____

Inhalation: TLV _____ LD_{50} (rat) _____ Odor _____ Solubility _____

Skin
Ingestion TLM/Specie _____ UEL _____ Flash Point °F. _____
D.W. Std. _____ Sp. Gravity _____ LEL _____

Notification

State Police District _____

LAKE Co. Health Department
Name

Time: _____ Rep: _____ Time: _____ Rep: _____

Civil Defense

Time: _____ Rep: _____

Conservation Officer

Time: _____ Rep: _____

EPA

Time: _____ Rep: _____

Poison Control Center

Time: _____ Rep: _____

Other

Time: _____ Rep: _____

Agency Personnel

Name: MR. McPHEE Time: _____ Ext: (312) 886-5348
Remarks: LAWYER W/ EPA

Name: SALLY SWANSON Time: _____ Ext: (312) 886-4454
Remarks: Cont. for CC. of I. w/ EPA

Name: _____ Time: _____ Ext: _____
Remarks: Cincinnati Based Cleanup Contractor.

Name: _____ Time: _____ Ext: (219) 949-7447
Remarks: SECURITY GUARD for CCI at GARY

Name: _____ Time: _____ Phone: _____
Remarks: _____

Name: _____ Time: _____ Phone: _____
Remarks: _____

SBH 01-300
8/83
State Form 13490
LOG 2A/1/85

Prepared by: Mark Mauck

IN THE MATTER OF:
CONSERVATION CHEMICAL COMPANY
OF ILLINOIS, INC.
GARY, INDIANA

SIGNATORIES

Each undersigned representative of a signatory to this Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Order and to bind such signatory and its successors and assigns, to this document.

Agreed this 27th day of August, 1998.

AMERICAN CHAIN & CABLE CO., INC.

By _____
Charles M. Denton (P-33269)
VARNUM, RIDDERING, SCHMIDT & HOWLETT LLP
Bridgewater Place, P.O. Box 352
Grand Rapids, MI 49501-0352
Phone: 616/336-6000
Fax: 616/336-7000

IN THE MATTER OF:
CONSERVATION CHEMICAL COMPANY
OF ILLINOIS, INC.
GARY, INDIANA

SIGNATORIES

Each undersigned representative of a signatory to this Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Order and to bind such signatory and its successors and assigns, to this document.

Agreed this 24th day of August, 1998.

By Robert J Taggart
Corporate Director EHS
Crucible Materials Corporation
Trent Tube Division

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF: CONSERVATION CHEMICAL COMPANY OF ILLINOIS, INC., GARY, INDIANA Proceeding under Sections 106 and 122(h) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9606 and 9622(h).	U.S. EPA DOCKET NO. V-W-98-C-497 Administrative Order on Consent

DECLARATION OF WILLIAM E. MUNO

The authority vested in the President of the United States by Sections 106(a), 107, and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERLCA"), 42 U.S.C. §§ 9606(a), 9607, and 9622, to enter into settlements for performance of removal actions and reimbursement of response costs incurred by the United States was delegated to the Administrator of the United States Environmental Protection Agency ("U.S. EPA") by Executive Order Number 12580, 52 Federal Register 2923 (Jan. 29, 1987), and further delegated to the Regional Administrators by U.S. EPA Delegation Numbers 14-14-A, 14-14-C, and 14-14-D. The Regional Administrator redelegated authority under Section 122 to the Director, Superfund Division, Region 5, by U.S. EPA Region 5 Delegation Number 14-14-D, May 2, 1996.

The Director, Superfund Division, consented and executed the proposed Administrative Order on Consent for the above-captioned matter on September 15, 1998. Pursuant to Section 122(i) of CERLCA, 42 U.S.C. §9622(i), notice of the settlement proposal appeared in the Federal Register on November 19, 1998, 63 Fed. Reg. 64256. The 30 day public notice and comment period following publication closed on December 19, 1998. As required by Section 122(h) of CERCLA, 42 U.S.C. §9622(h), for facilities where response costs exceed $500,000, the Administrative Order on Consent was approved by the Attorney General's designee, Lois J. Schiffer, on October 26, 1998.

Section 122(i)(3) of CERCLA provides that "the head of the department or agency shall consider any comments filed. . . and may withdraw or withhold consent to the proposed settlement if such comments disclose facts or considerations which indicate the proposed settlement is inappropriate, improper, or inadequate." 42 U.S.C. §9622(i)(3). U.S. EPA received comments on this proposed settlement and prepared a response to these comments in a letter to the commenter. U.S. EPA finds that the comments do not disclose facts or considerations which

indicate that the proposed settlement was inappropriate, improper, or inadequate. Accordingly, the settlement embodied in the Administrative Order on Consent in the above-captioned matter is approved as a final matter.

Feb. 1, 1999
Date

William E. Muno, Director
Superfund Division

ATTACHMENT A
TO THE ADMINISTRATIVE ORDER BY CONSENT
IN THE MATTER OF
THE CONSERVATION CHEMICAL COMPANY OF ILLINOIS, INC.,
GARY, INDIANA

LIST OF RESPONDENTS

Lucent Technologies Inc. (for Western Electric; Teletype; and Bell Telephone Laboratories)

Gary Steel Supply Company

Bethlehem Steel Corporation

LaSalle Steel Company

AlliedSignal Inc. (for Universal Oil Products)

K. A. Steel Chemicals Inc.

Union Oil Company of California d/b/a/ UNOCAL

The Steel Company (formerly known as Chicago Steel & Pickling)

Union Carbide Corporation

Ansul, Incorporated (for Ansul Co.)

Motorola Inc.

PPG Industries, Inc.

Crucible Materials Corporation, Trent Tube Division

American Chain & Cable Co., Inc.

Navistar International Transportation Corp.
(for International Harvester)

ATTACHMENT B
TO THE ADMINISTRATIVE ORDER BY CONSENT
IN THE MATTER OF
THE CONSERVATION CHEMICAL COMPANY OF ILLINOIS, INC.,
GARY, INDIANA

LIST OF POTENTIAL RESPONDENTS
THAT MAY BE ADDED TO THE ORDER AT A LATER DATE
IN ACCORDANCE WITH THE PROVISIONS OF THE ORDER

Russell Burdsall & Ward Nut and Bolt Company

Wean Pori

H. H. Howard Corporation

Toledo Pickling & Steel Service

Chemtech Industries, Inc.

Kalmus & Associates, Inc.

Nelson Steel & Wire Company

Industrial Color

Southern California Chemical Company, Inc.

Wellman Dynamics Corporation

Fansteel Electrometals

Pureco Systems, Inc.

IN THE MATTER OF:
CONSERVATION CHEMICAL COMPANY
OF ILLINOIS, INC.
GARY, INDIANA

SIGNATORIES

Each undersigned representative of a signatory to this Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Order and to bind such signatory and its successors and assigns, to this document.

Agreed this 21 day of Aug, 1998.

By R. L. Butler

IN THE MATTER OF:
CONSERVATION CHEMICAL COMPANY
OF ILLINOIS, INC.
GARY, INDIANA

SIGNATORIES

Each undersigned representative of a signatory to this Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Order and to bind such signatory and its successors and assigns, to this document.

Agreed this 18 day of August, 1998.

By _____

E. Kears Pollock
Executive Vice President
PPG Industries, Inc.

IN THE MATTER OF:
CONSERVATION CHEMICAL COMPANY
OF ILLINOIS, INC.
GARY, INDIANA

SIGNATORIES

Each undersigned representative of a signatory to this Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Order and to bind such signatory and its successors and assigns, to this document.

Agreed this 2 day of September, 1998.

By _____

IN THE MATTER OF:
CONSERVATION CHEMICAL COMPANY
OF ILLINOIS, INC.
GARY, INDIANA

SIGNATORIES

Each undersigned representative of a signatory to this Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Order and to bind such signatory and its successors and assigns, to this document.

Agreed this 20 day of August, 1998.

By Peter L. Flemister

ASSISTANT SECRETARY
for Ansul, Incorporated (for Ansul Co.)
Peter L. Flemister

IN THE MATTER OF:
CONSERVATION CHEMICAL COMPANY
OF ILLINOIS, INC.
GARY, INDIANA

SIGNATORIES

Each undersigned representative of a signatory to this Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Order and to bind such signatory and its successors and assigns, to this document.

Agreed this 31 day of July, 1998.

By G. Todd Ririe
G. Todd Ririe
Manager, Environmental Technical Services
Union Oil Company of California

The Steel Company
(formerly known as
Chicago Steel & Pickling Co.)

IN THE MATTER OF:
CONSERVATION CHEMICAL COMPANY
OF ILLINOIS, INC.
GARY, INDIANA

SIGNATORIES

Each undersigned representative of a signatory to this Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Order and to bind such signatory and its successors and assigns, to this document.

Agreed this 26th day of August, 1998.

THE STEEL COMPANY (formerly known as Chicago Steel & Pickling Company)

By _____

ALLIED SIGNAL

IN THE MATTER OF:
CONSERVATION CHEMICAL COMPANY
OF ILLINOIS, INC.
GARY, INDIANA

SIGNATORIES

Each undersigned representative of a signatory to this Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Order and to bind such signatory and its successors and assigns, to this document.

Agreed this 27th day of August, 1998.

By Robert J. Ford

Acting Director
Remediation and Evaluation Services

K. A. STEEL
CHEMICALS, INC.

IN THE MATTER OF:
CONSERVATION CHEMICAL COMPANY
OF ILLINCIS, INC.
GARY, INDIANA

SIGNATORIES

Each undersigned representative of a signatory to this Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Order and to bind such signatory and its successors and assigns, to this document.

Agreed this 27 day of AUGUST, 1998

K.A. STEEL CHEMICALS INC.

By Bert Ludy

Title: CFO, TREASURER, SECRETARY

IN THE MATTER OF:
CONSERVATION CHEMICAL COMPANY
OF ILLINOIS, INC.
GARY, INDIANA

SIGNATORIES

Each undersigned representative of a signatory to this Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Order and to bind such signatory and its successors and assigns, to this document.

Agreed this 13th day of August, 1998

Bethlehem Steel Corporation

By A.E. Moffitt Jr.
Senior Vice President

LA SALLE STEEL CO.

IN THE MATTER OF:
CONSERVATION CHEMICAL COMPANY
OF ILLINOIS, INC.
GARY, INDIANA

SIGNATORIES

Each undersigned representative of a signatory to this Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Order and to bind such signatory and its successors and assigns, to this document.

Agreed this 19th day of August, 1992.

By Raymond Bonk

IN THE MATTER OF:
CONSERVATION CHEMICAL COMPANY
OF ILLINOIS, INC.
GARY, INDIANA

SIGNATORIES

Each undersigned representative of a signatory to this Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Order and to bind such signatory and its successors and assigns, to this document.

Agreed this 7th day of August, 1998

By Gregg P. Vierkant

Gregory P. Vierkant
for Lucent Technologies Inc.

IN THE MATTER OF:
CONSERVATION CHEMICAL COMPANY
OF ILLINOIS, INC.
GARY, INDIANA

SIGNATORIES

Each undersigned representative of a signatory to this Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Order and to bind such signatory and its successors and assigns, to this document.

Agreed this 31st day of August, 1998.

GARY STEEL SUPPLY COMPANY

By Stephen R Smith

Stephen R. Smith
Vice President, Secretary and General Counsel

IN THE MATTER OF:
CONSERVATION CHEMICAL COMPANY
OF ILLINOIS, INC.
GARY, INDIANA

IT IS SO ORDERED AND AGREED

BY: _____ DATE: 9/15/98
William E. Muno, Director
Superfund Division
United States Environmental Protection Agency
Region 5

IN THE MATTER OF:
CONSERVATION CHEMICAL COMPANY
OF ILLINOIS, INC.
GARY, INDIANA

SIGNATORIES

Each undersigned representative of a signatory to this Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Order and to bind such signatory and its successors and assigns, to this document.

Agreed this 10th day of August, 1998.

By Edith M. Andrente

settlement an opportunity to comment, solely on the cost recovery component of the settlement, and to consider comments filed in determining whether to consent to the proposed settlement. After consideration of any comments submitted during the 30 day public comment period held pursuant to Section 122(I) of CERCLA, EPA may withhold consent to all or part of Section VII of this Order if comments received disclose facts or considerations which indicate that Section VII of this Order is inappropriate, improper or inadequate. Otherwise, the portion of Section VII concerning payment of "past response costs" shall become effective when EPA issues notice to Respondents that EPA is not withdrawing from that Section of the Order.

XXI. SIGNATURE BY RESPONDENTS

Each Respondent to this Order shall execute the Order on a separate signature page by signing the appropriate signature line. The signature pages for Respondents shall be submitted collectively to EPA by the Respondents, accompanied by a list identifying each of the Respondents. This list shall be attached hereto as Attachment A. Those additional parties identified on the accompanying list attached hereto as Attachment B may be added to the Order as Respondents with the consent of the initial Respondents within twelve (12) months of the effective date of this Order or prior to the commencement of an action to enforce this Order, if any, whichever occurs first. Additional parties may join the order by signing the appropriate signature page, and sending it to the Respondents' Chairperson who will send the original signature page to EPA along with a revised Attachment A and a statement signed by the Respondents' Chairperson that the additional Respondent is cooperating and participating with the other Respondents. Nothing in this provision shall modify the effective date of this Order, nor shall it alter the time frames and schedules set forth herein.

Each signature page to this Order shall be deemed an original, all of which together shall consitute one and the same instrument.

The addition of any party pursuant to the provisions of this Section is subject to EPA's unreviewable prosecutorial discretion.

its (their) obligations to obtain such formal approval as may be required by this Order, and to comply with all requirements of this Order unless it is formally modified.

XVIII. NOTICE OF COMPLETION

When EPA determines, after EPA's review of the Final Report, that all work has been fully performed in accordance with this Order, except for certain continuing obligations required by this Order (e.g., record retention, or payment of costs), EPA will provide written notice to the Respondents. If EPA determines that any removal activities have not been completed in accordance with this Order, EPA will notify the Respondents, provide a list of the deficiencies, and require that Respondents modify the Work Plan if appropriate to correct such deficiencies. The Respondents shall implement the modified and approved Work Plan and shall submit a modified Final Report in accordance with the EPA notice. Failure to implement the approved modified Work Plan shall be a violation of this Order.

Within 60 days of EPA's written approval of Respondents' Final report or modified Final Report, EPA shall issue a Notice of Completion to the Respondents. The issuance of this Notice of Completion shall not relieve Respondents of any continuing responsibilities such as retention of records and payment of response costs.

XIX. SEVERABILITY

If a court issues an order that invalidates any provision of this Order or finds that Respondents have sufficient cause not to comply with one or more provisions of this Order, Respondents shall remain bound to comply with all provisions of this Order not invalidated by the court's order.

XX. EFFECTIVE DATE

This Order shall be effective upon receipt by Respondents of a copy of this Order signed by the Director, Superfund Division, EPA Region 5. Provided, however, that final acceptance by EPA of the portion of Section VII (Reimbursement of Costs) of this Order concerning "past response costs" shall be subject to Section 122(i) of CERCLA, 42 U.S.C. § 9622(i). That Section requires EPA to publish notice of the proposed settlement in the Federal Register, to provide persons who are not parties to the proposed

actions or claims to the extent provided by Section 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4). Nothing in this Order precludes Parties from asserting any claims, causes of action or demands against any persons not parties to this Order for indemnification, contribution, or cost recovery.

XVI. INDEMNIFICATION

Respondents agree to indemnify, save and hold harmless the United States, its officials, agents, contractors, subcontractors, employees and representatives from any and all claims or causes of action: (A) arising from, or on account of, the negligent or otherwise wrongful acts or omissions of Respondents and Respondents' officers, heirs, directors, employees, agents, contractors, subcontractors, receivers, trustees, successors or assigns, in carrying out actions pursuant to this Order; and (B) for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between any one or more of Respondents, and any persons for performance of work on or relating to the Site, including claims on account of construction delays. Nothing in this Order, however, requires indemnification by Respondents for any claim or cause of action against the United States based on negligent action taken solely and directly by EPA (not including oversight or approval of plans or activities of the Respondents).

XVII. MODIFICATIONS

Modifications to any plan or schedule may be made in writing by the OSC or at the OSC's oral direction provided, however, that the modification is within the scope of the Order. If the OSC makes an oral modification, it will be memorialized in writing within 7 business days; however, the effective date of the modification shall be the date of the OSC's oral direction. Any other requirements of this Order may be modified in writing by mutual agreement of the parties.

If Respondents seek permission to deviate from any approved plan or schedule, Respondents' Project Coordinator shall submit a written request to EPA for approval outlining the proposed modification and its basis.

No informal advice, guidance, suggestion, or comment by EPA regarding reports, plans, specifications, schedules, or any other writing submitted by the Respondents shall relieve Respondents of

person may have under CERCLA, other statutes, or the common law, including but not limited to any claims of the United States for costs, damages and interest under Sections 106(a) or 107(a) of CERCLA, 42 U.S.C. §§ 9606(a), 9607(a).

This Order does not constitute a preauthorization of funds under Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2). The Respondents waive any claim to payment under Sections 106(b), 111, and 112 of CERCLA, 42 U.S.C. §§ 9606(b), 9611, and 9612, against the United States or the Hazardous Substance Superfund arising out of any action performed under this Order.

No action or decision by EPA pursuant to this Order shall give rise to any right to judicial review except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XIV. COVENANT NOT TO SUE

Except as otherwise specifically provided in this Order, upon issuance of the EPA notice referred to in Section XVIII (Notice of Completion), EPA covenants not to sue Respondents for judicial imposition of damages or civil penalties or to take administrative action against Respondents for any failure to perform removal actions agreed to in this Order except as otherwise reserved herein.

Except as otherwise specifically provided in this Order, in consideration and upon Respondents' payment of the response costs specified in Section VII of this Order, EPA covenants not to sue or to take administrative action against Respondents under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), for recovery of past and oversight costs incurred by the United States in connection with this removal action and this Order. This covenant not to sue shall take effect upon the receipt by EPA of the payments required by Section VII (Reimbursement of Costs).

These covenants not to sue are conditioned upon the complete and satisfactory performance by Respondents of their obligations under this Order. These covenants not to sue extend only to the Respondents and do not extend to any other person.

XV. CONTRIBUTION PROTECTION

With regard to claims for contribution against Respondents for matters addressed in this Order, the Parties hereto agree that the Respondents are entitled to protection from contribution

pursuant to Section 106 of CERCLA, 42 U.S.C. § 9606.

The stipulated penalties in this Section are in addition to and not in lieu of civil penalties and punitive damages normally available under CERCLA, 42 U.S.C. §§ 9606(b)(1), 9607(c)(3).

XI. RESERVATION OF RIGHTS BY RESPONDENTS

Except as specifically provided in this Order, Respondents expressly reserve all rights and defenses they may have.

XII. RESERVATION OF RIGHTS BY EPA

Except as specifically provided in this Order, nothing herein shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site; to address the destruction of or loss of natural resources at or from the Site, and for the costs of any natural resource damage assessments regarding the Site; or to address matters of potential criminal liability associated with the Site. Further, nothing herein shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Order. EPA also reserves the right to take any other legal or equitable action as it deems appropriate and necessary, or to require the Respondents in the future to perform additional activities pursuant to CERCLA or any other applicable law.

XIII. OTHER CLAIMS

By issuance of this Order, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondents. The United States or EPA shall not be a party or be held out as a party to any contract entered into by the Respondents or their directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out activities pursuant to this Order.

Except as expressly provided in Section XIV (Covenant Not To Sue), nothing in this Order constitutes a satisfaction of or release from any claim or cause of action against the Respondents or any person not a party to this Order, for any liability such

Five Hundred Dollars ($1,500) per day for each day of delay, or part thereof, thereafter;

c. For failure to submit the monthly written Progress Reports pursuant to Section 2.5 at the times required under the terms of this Order: Two Hundred Dollars ($200) per day for the first one (1) to seven (7) days of delay, and Three Hundred Dollars ($300) per day for each day of delay, or part thereof, thereafter;

d. For failure to submit the Final Report pursuant to Section 2.6 at the time required under the terms of this Order: Five Hundred Dollars ($500) per day for the first one (1) to seven (7) days of delay, and Seven Hundred Fifty Dollars ($750) per day for each day of delay, or part thereof, thereafter;

Upon receipt of written demand by EPA, Respondents shall make payment to EPA within 30 days and interest shall accrue on late payments in accordance with Section VII of this Order (Reimbursement of Costs).

Even if violations are simultaneous, separate penalties shall accrue for separate violations of this Order. Penalties accrue and are assessed per violation per day. Penalties shall accrue regardless of whether EPA has notified Respondents of a violation or act of noncompliance. The payment of penalties shall not alter in any way Respondents' obligations to complete the performance of the work required under this Order. Stipulated penalties shall accrue, but need not be paid, during any dispute resolution period concerning the particular penalties at issue. If Respondents prevail upon resolution, Respondents shall pay only such penalties as the resolution requires. In its unreviewable discretion, EPA may waive its rights to demand all or a portion of the stipulated penalties due under this Section. Such a waiver must be made in writing.

Violation of any provision of this Order may subject Respondents to civil penalties of up to twenty-five thousand dollars ($25,000) per violation per day, as provided in Section 106(b)(1) of CERCLA, 42 U.S.C. § 9606(b)(1). Respondents may also be subject to punitive damages in an amount up to three times the amount of any cost incurred by the United States as a result of such violation, as provided in Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Should Respondents violate this Order or any portion hereof, EPA may carry out the required actions unilaterally, pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, and/or may seek judicial enforcement of this Order

Respondents shall notify EPA orally within 24 hours after Respondents become aware of any event that Respondents contend constitutes a force majeure, and in writing within 7 calendar days after the event. Such notice shall: identify the event causing the delay or anticipated delay; estimate the anticipated length of delay, including necessary demobilization and re-mobilization; state the measures taken or to be taken to minimize the delay; and estimate the timetable for implementation of the measures. Respondents shall take all reasonable measures to avoid and minimize the delay. Failure to comply with the notice provision of this Section shall be grounds for EPA to deny Respondents an extension of time for performance. Respondents shall have the burden of demonstrating by a preponderance of the evidence that the event is a force majeure, that the delay is warranted under the circumstances, and that best efforts were exercised to avoid and mitigate the effects of the delay.

If EPA determines a delay in performance of a requirement under this Order is or was attributable to a force majeure, the time period for performance of that requirement shall be extended as deemed necessary by EPA, taking into account the length of the delay and necessary remobilization requirements. EPA's determination of whether a delay in performance is attributable to a force majeure and the length of the time period extension are both subject to the dispute resolution procedures in Section VIII. Such an extension shall not alter Respondents' obligation to perform or complete other tasks required by the Order which are not directly affected by the force majeure.

X. STIPULATED AND STATUTORY PENALTIES

For each day, or portion thereof, that Respondents fail to fully perform any requirement of this Order in accordance with the schedule established pursuant to this Order, Respondents shall be liable as follows:

a. For failure to submit a complete Work Plan pursuant to Sections 2.1 through 2.3 of this Order at the time required under the terms of this Order: Five Hundred Dollars ($500.00) per day for the first one (1) to seven (7) days of delay, and One Thousand Dollars ($1,000) per day for each day of delay, or part thereof, thereafter:

b. For failure to commence and perform work in accordance with the schedule prescribed in this Order or a U.S. EPA-approved Work Plan: One Thousand Dollars ($1,000) per day for the first one (1) to seven (7) days of delay, and One Thousand

If the Respondents object to any EPA action taken pursuant to this Order, including billings for response costs, the Respondents shall notify EPA in writing of their objection within 10 calendar days of such action, unless the objections have been informally resolved. This written notice shall include a statement of the issues in dispute, the relevant facts upon which the dispute is based, all factual data, analysis or opinion supporting Respondents' position, and all supporting documentation on which such party relies. EPA shall submit its Statement of Position, including supporting documentation, no later than 10 calendar days after receipt of the written notice of dispute. In the event that these 10-day time periods for exchange of written documents may cause a delay in the work, they shall be shortened upon, and in accordance with, notice by EPA. The time periods for exchange of written documents relating to disputes over billings for response costs may be extended at the sole discretion of EPA.

An administrative record of any dispute under this Section shall be maintained by EPA. The record shall include the written notification of such dispute, and the Statement of Position served pursuant to the preceding paragraph. Upon review of the administrative record, the Director of the Waste Management Division, EPA Region 5, shall resolve the dispute consistent with the NCP and the terms of this Order.

Respondents' obligations under this Order shall not be tolled by submission of any objection for dispute resolution under this Section. Following resolution of the dispute, as provided by this Section, Respondents shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with EPA's decision, whichever occurs.

IX. FORCE MAJEURE

Respondents agree to perform all requirements under this Order within the time limits established under this Order, unless the performance is delayed by a force majeure. For purposes of this Order, a force majeure is defined as any event arising from causes beyond the control of Respondents or of any entity controlled by Respondents, including but not limited to their contractors and subcontractors, that delays or prevents performance of any obligation under this Order despite Respondents' best efforts to fulfill the obligation. Force majeure does not include financial inability to complete the work or increased cost of performance.

U.S. Environmental Protection Agency
Superfund Accounting
P.O. Box 70753
Chicago, Illinois 60673

Respondents shall simultaneously transmit a copy of the check to the Director, Superfund Division, U.S. EPA Region 5, 77 West Jackson Blvd., Chicago, Illinois, 60604-3590. Payments shall be designated as "Response Costs - Conservation Chemical of Illinois, Inc. Site" and shall reference the payors' names and addresses, the EPA Site identification number (Y1), and the docket number of this Order.

In the event that any payment is not made within the deadlines described above, Respondents shall pay interest on the unpaid balance. Interest is established at the rate specified in Section 107(a) of CERCLA, 42 U.S.C. § 9607(a). The interest shall begin to accrue on the date of the Respondents' receipt of the bill (or for past response costs, on the effective date of this Order). Interest shall accrue at the rate specified through the date of the payment. Payments of interest made under this paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondents' failure to make timely payments under this Section.

Respondents may dispute all or part of a bill for oversight costs" submitted under this Order, if Respondents allege that EPA has made an accounting error, or if Respondents allege that a cost item is inconsistent with the NCP.

If any dispute over costs is resolved before payment is due, the amount due will be adjusted as necessary. If the dispute is not resolved before payment is due, Respondents shall pay the full amount of the uncontested costs into the Hazardous Substance Fund as specified above on or before the due date. Within the same time period, Respondents shall pay the full amount of the contested costs into an interest-bearing escrow account. Respondents shall simultaneously transmit a copy of both checks to the OSC. Respondents shall ensure that the prevailing party or parties in the dispute shall receive the amount upon which they prevailed from the escrow funds plus interest within 20 calendar days after the dispute is resolved.

VIII. DISPUTE RESOLUTION

The parties to this Order shall attempt to resolve, expeditiously and informally, any disagreements concerning this Order.

the reoccurrence of such a release. Respondents shall also comply with any other notification requirements, including those in CERCLA Section 103, 42 U.S.C. § 9603, and Section 304 of the Emergency Planning and Community Right-To-Know Act, 42 U.S.C. § 11004.

VI. AUTHORITY OF THE EPA ON-SCENE COORDINATOR

The OSC shall be responsible for overseeing the implementation of this Order. The OSC shall have the authority vested in an OSC by the NCP, including the authority to halt, conduct, or direct any work required by this Order, or to direct any other response action undertaken by EPA or Respondents at the Site. Absence of the OSC from the Site shall not be cause for stoppage of work unless specifically directed by the OSC.

VII. REIMBURSEMENT OF COSTS

Within 30 days of the Effective Date of this Order, Respondents shall pay Two Hundred Fifty-eight Thousand Three Hundred Four Dollars ($258,304.00) in payment of past response costs. "Past response costs" are all costs incurred through November 30, 1997, including, but not limited to, direct and indirect costs, that the United States, its employees, agents, contractors, consultants, and other authorized representatives incurred with regard to the Site.

Respondents shall pay "oversight costs" of the United States related to this Order that are not inconsistent with the NCP. EPA will send Respondents a bill for "oversight costs" on an annual basis. "Oversight costs" shall include all costs paid by the United States in connection with the Site, including, but not limited to, direct and indirect costs that the United States incurs in reviewing or developing plans, reports and other items in connection with this Order on and after December 1, 1997. Oversight costs shall not include those costs incurred by the United States in connection with U.S. EPA's cleanup of the PCB-contaminated waste pile and adjacent area.

Respondents shall, within 30 calendar days of receipt of a bill, remit a cashier's or certified check for the amount of the bill made payable to the "Hazardous Substance Superfund," to the following address:

privileged documents and information retained under this Section at any time before expiration of the six year period at the written request of EPA.

6. Off-Site Shipments

All hazardous substances, pollutants or contaminants removed off-Site pursuant to this Order for treatment, storage or disposal shall be treated, stored, or disposed of at a facility in compliance, as determined by EPA, with the CERCLA off-Site Rule, 40 C.F.R. § 300.440, 58 Federal Register 49215 (Sept. 22, 1993).

7. Compliance With Other Laws

Respondents shall perform all actions required pursuant to this Order in accordance with all applicable local, state, and federal laws and regulations except as provided in CERCLA Section 121(e), 42 U.S.C. § 9621(e), and 40 C.F.R. § 300.415(I). In accordance with 40 C.F.R. § 300.415(I), all on-Site actions required pursuant to this Order shall, to the extent practicable, as determined by EPA, considering the exigencies of the situation, attain applicable or relevant and appropriate requirements under federal environmental or state environmental or facility siting laws.

8. Emergency Response and Notification of Releases

If any incident, or change in Site conditions, during the activities conducted pursuant to this Order causes or threatens to cause an additional release of hazardous substances from the Site or an endangerment to the public health, welfare, or the environment, the Respondents shall immediately take all appropriate action to prevent, abate or minimize such release or endangerment caused or threatened by the release. In the event such release poses an endangerment to the public health, welfare, or the environment, Respondents shall also immediately notify the OSC or, in the event of his/her unavailability, shall notify the Regional Duty Officer, Emergency Response Branch, Region 5 at (312) 353-2318, of the incident or Site conditions. If Respondents fail to respond, EPA may respond to the release or endangerment and reserve the right to recover costs associated with that response.

Where immediate notification to the OSC is required, Respondents shall also submit a written report to EPA within 7 business days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent

4. Access to Property and Information

Respondents shall provide or obtain access to the Site and off-Site areas to which access is necessary to implement this Order, and shall provide access to all records and documentation related to the conditions at the Site and the actions conducted pursuant to this Order. Such access shall be provided to EPA employees, contractors, agents, consultants, designees, representatives, and State of Indiana representatives. These individuals shall be permitted to move freely at the Site and appropriate off-Site areas in order to conduct actions which EPA determines to be necessary. Respondents shall submit to EPA, upon request, the results of all sampling or tests and all other data generated by Respondents or their contractors, or on the Respondents' behalf during implementation of this Order.

Where work under this Order is to be performed in areas owned by or in possession of someone other than Respondents, Respondents shall use their best efforts to obtain all necessary access agreements within 14 calendar days after the effective date of this Order, or as otherwise specified in writing by the OSC. Respondents shall immediately notify EPA if, after using their best efforts, they are unable to obtain such agreements. Respondents shall describe in writing their efforts to obtain access. EPA may then assist Respondents in gaining access, to the extent necessary to effectuate the response actions described herein, using such means as EPA deems appropriate. Respondents shall reimburse EPA for all costs and attorneys fees incurred by the United States in obtaining such access.

The inability to secure any access required to implement this Order after the Respondents take reasonable measures may constitute a *force majeure* as defined in Section VIII.

5. Record Retention, Documentation, Availability of Information

Respondents shall preserve all documents and information, in their possession or the possession of their contractors, subcontractors or representatives, relating to work performed under this Order, or relating to the hazardous substances found on or released from the Site, for six years following completion of the removal actions required by this Order. At the end of this six year period and at least 60 days before any non-duplicative document or information is destroyed, Respondents shall notify EPA that such documents and information are available to EPA for inspection, and upon request, shall provide the originals or copies of such non-privileged documents and information to EPA. In addition, Respondents shall provide non-

requirements set forth in Section 300.165 of the NCP, 40 C.F.R. § 300.165. The final report shall also include a good faith estimate of total costs incurred in complying with the Order, a listing of quantities and types of materials removed off-Site or handled on-Site, a discussion of removal and disposal options considered for those materials, a listing of the ultimate destinations of those materials, a presentation of the analytical results of all sampling and analyses performed, and accompanying appendices containing all relevant documentation generated during the removal action (e.g., manifests, invoices, bills, contracts, and permits).

The final report shall also include the following certification signed by a person who supervised or directed the preparation of that report:

> Under penalty of law, I certify that, to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of this report, the information submitted is true, accurate, and complete.

Within 120 days of receipt of Respondent's Final Report, EPA shall provide Respondents with either a written approval of the Final Report, or a written list of the deficiencies that must be corrected before a modified Final Report may be reviewed and approved in writing by EPA. If the Respondents are required to correct deficiencies and, subsequently, submit a revised Final Report, EPA shall provide Respondents with either a written approval of the revised Final Report or a written list of the deficiencies of the revised Final Report within 120 days of receipt of the revised Final Report.

3. Additional Work

In the event that U.S. EPA or the Respondents determine that additional work is necessary to accomplish the objectives of this Order, U.S. EPA shall specify in writing the reasons why such additional work is necessary and a schedule for completion of such work. If the Respondents do not agree to perform additional work as specified by U.S. EPA, the dispute shall be resolved pursuant to the Dispute Resolution provisions, Section VIII, of this Order. In no event shall this paragraph 3, limit the Respondents' right to reopen the issue identified in paragraph 2.p. of the cleanup of such "other PCB-contaminated material" not required to be removed pursuant to paragraphs 2.n. and 2.o.

Upon request by EPA, Respondents shall have such a laboratory analyze samples submitted by EPA for quality assurance monitoring. Respondents shall provide to EPA the quality assurance/quality control procedures followed by all sampling teams and laboratories performing data collection and/or analysis. Respondents shall also ensure provision of analytical tracking information consistent with OSWER Directive No. 9240.0-2B, "Extending the Tracking of Analytical Services to PRP-Lead Superfund Sites."

Upon request by EPA, Respondents shall allow EPA or its authorized representatives to take split and/or duplicate samples of any samples collected by Respondents or their contractors or agents while performing work under this Order. Respondents shall notify EPA not less than 3 business days in advance of any sample collection activity. EPA shall have the right to take any additional samples that it deems necessary.

2.4 Post-Removal Site Control

In accordance with the Work Plan schedule, or as otherwise directed by the OSC, Respondents shall submit a proposal for post-removal Site control, consistent with Section 300.415(k) of the NCP, 40 C.F.R. § 300.415(k), and OSWER Directive 9360.2-02. Upon EPA approval, Respondents shall implement such controls and shall provide EPA with documentation of all post-removal Site control arrangements.

2.5 Reporting

Respondents shall submit a monthly written progress report to EPA concerning actions undertaken pursuant to this Order, beginning 30 calendar days after the date of EPA's approval of the Work Plan, until termination of this Order, unless otherwise directed in writing by the OSC. These reports shall describe all significant developments during the preceding period, including the work performed and any problems encountered, analytical data received during the reporting period, and developments anticipated during the next reporting period, including a schedule of work to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

2.6 Final Report

Within 60 calendar days after completion of all removal actions required under this Order, the Respondents shall submit for EPA review a final report summarizing the actions taken to comply with this Order. The final report shall conform to the

u. PCB action levels for the cleanup at the CCCI Site shall be 50 ppm PCB, and the parties shall address such areas in accordance with the provisions of this Administrative Order on Consent.

2.1 Work Plan and Implementation

Within 30 business days after the effective date of this Order, the Respondents shall submit to EPA for approval a draft Work Plan for performing the removal activities set forth above. The draft Work Plan shall provide a description of, and an expeditious schedule for, the actions required by this Order.

EPA may approve, disapprove, require revisions to, or modify the draft Work Plan. If EPA requires revisions, Respondents shall submit a revised draft Work Plan within 7 business days of receipt of EPA's notification of required revisions. Respondents shall implement the Work Plan as finally approved in writing by EPA in accordance with the schedule approved by EPA. Once approved, or approved with modifications, the Work Plan, the schedule, and any subsequent modifications shall be fully enforceable under this Order. Respondents shall notify EPA at least 48 hours prior to beginning the on-Site work and/or remobilization pursuant to the EPA approved Work Plan. Respondents shall not commence or undertake any removal actions at the Site without prior EPA approval.

2.2 Health and Safety Plan

Within 10 business days after the effective date of this Order, the Respondents shall submit for EPA review and comment a plan that ensures the protection of the public health and safety during performance of on-site work under this Order. This plan shall comply with applicable Occupational Safety and Health Administration (OSHA) regulations found at 29 C.F.R. Part 1910. If EPA determines it is appropriate, the plan shall also include contingency planning. Respondents shall incorporate all changes to the plan recommended by EPA, and implement the plan during the pendency of the removal action.

2.3 Quality Assurance and Sampling

All sampling and analyses performed pursuant to this Order shall conform to EPA direction, approval, and guidance regarding sampling, quality assurance/quality control (QA/QC), data validation, and chain of custody procedures. Respondents shall ensure that the laboratory used to perform the analyses participates in a QA/QC program that complies with EPA guidance.

soil materials" up to 500 cubic yards, Respondents reserve the right to "reopen" the issue of the cleanup of such "other PCB-contaminated materials", as set forth in Subparagraph p. of this Section.

p. With regard to all "other PCB-contaminated materials" found on-Site that are not required to be removed by subparagraphs n. and o. above, Respondents reserve the right to "reopen" the issue of the cleanup of such "other PCB-contaminated material" not required to be removed under subparagraphs n. and o. above. In the event that Respondents are entitled and choose to reopen this Order with respect to "other PCB-contaminated material" that is not required to be removed under subparagraph n. and o. above, Respondents will have no obligations under the terms of this Order, with regard to the "other PCB-contaminated material" that is the subject of the reopener, and shall reserve all defenses to liability regarding such "other PCB-contaminated material" that is the subject of the reopener, as though Respondents had not entered into this Order.

q. Decontaminate steel tanks, lines, empty drums, pits, and containers, and collect and treat or dispose of waste-water generated. Remove decontaminated steel and debris to an appropriate recycling facility.

r. Backfill all excavated areas with clean fill and level to pre-excavation grades.

s. Demolish all above-ground structures and level the Site to grade. All buildings, wood cribbing, abandoned railroad spurs and elevated piping systems will be dismantled and disposed of appropriately.

t. Prepare and implement a verification sampling plan to assess whether appropriate cleanup levels, as specified in the approved Work Plan, have been met for all identified contaminants for all media of concern. The verification sampling shall include, at a minimum, sampling of soils, excluding the PCB-contaminated waste pile and adjacent area, pits, fixated lagoon sludge, surface water, and any decontaminated buildings or debris. If verification sampling demonstrates that cleanup levels for these contaminants have not been met, conduct additional removal activities as per the direction of the OSC.

k. Collect air samples, as appropriate, during the implementation of the Work Plan, for personnel and general Site perimeter air monitoring to assess if dust, volatile organics, PCBs or other contaminants of concern are below acceptable OSHA standards;

l. Conduct an investigation, including sampling and analysis, to determine which structures on-Site contain asbestos. Based on the investigation, all friable asbestos will be abated, packaged and disposed of in accordance with applicable regulations, prior to the demolition of all structures containing friable asbestos.

m. Based on results from the initial sampling and extent of contamination study, treat, remove, and properly dispose of all hazardous substances or hazardous wastes, excluding the PCB-contaminated waste pile and adjacent area, at a RCRA- or TSCA-approved facility which is in compliance with the CERCLA off-Site Rule. At a minimum, Respondents shall remove and dispose of, or treat acid liquids and solids, caustic liquids and solids, cyanide liquids and solids, solvents and flammable liquids, and chromium-contaminated soils.

n. With regard to any "other PCB-contaminated materials" that are found during the "above-ground" cleanup, including response activities regarding any tanks, vats, pits, and above-ground drums and above-ground structures, Respondents shall remove and dispose of any "other PCB-contaminated materials" found in any tank, vat, pit, and above-ground drum and structure in a manner that is in compliance with all applicable laws.

o. With regard to any discrete pockets of "other PCB-contaminated materials" that are found in the Eastern 1/3 of the Site, as described in Section V, Subparagraph f. above, including in "hot spot" areas around the tanks, vats, pits, and above-ground drums, and around the lagoons, Respondents shall remove up to 500 cubic yards of such "other PCB-contaminated materials." However, with regard to "other PCB-contaminated materials", as described in this subparagraph o., that are estimated to exceed 500 cubic yards in a single pocket, prior to or after Respondents' removal of such "other PCB-contaminated

tracks and the unnamed railroad tracks that transect the CCCI Site. The extent of contamination study will also include hot spots in and around the tank and drum storage areas, but will exclude the area of the PCB-contaminated waste pile and adjacent area. This study is to characterize the surface and sub-surface soil contamination. Surface and sub-surface samples shall be analyzed for PCBs, TCL and TAL parameters, Cyanide, TCLP parameters, and other RCRA-characteristic analytes.

g. Conduct a geophysical survey in the eastern one-third of the Site that lies roughly between the EJ&E Railroad tracks and the unnamed railroad tracks that transect the CCCI Site, and along the border of the CCCI Site (adjacent to the Western Scrap property) from the EJ&E Railroad tracks up to the PCB-contaminated waste pile. The geophysical survey will also include hot spots in and around the tank and drum storage areas, but will exclude the PCB-contaminated waste pile and adjacent area. This survey is to identify areas where suspected buried drums are located. Excavate, treat and dispose of contaminated soils and any buried drums from the survey area at appropriate disposal facilities.

h. Perform a Treatability Study on the three waste lagoons to assess the viability of on-Site stabilization as a viable response action. If on-Site stabilization proves viable, the two lagoons located on the Site property may be stabilized in place, and the third lagoon may be moved onto the property and stabilized, if necessary. The stabilized wastes will then be capped with a minimum of two feet of compacted clay. To the extent that on-Site stabilization is not viable, remove and dispose of the materials in the contaminated waste lagoons at a RCRA- or TSCA-approved facility which is in compliance with the CERCLA off-Site Rule.

i. Inventory all existing CCCI-related groundwater monitoring wells at the Site. Abandon existing groundwater monitoring wells as per IDEM regulations.

j. Assess, design, implement, and install a hanging containment barrier along the Southeast border of the Site to contain the floating chemical layer in the shallow groundwater aquifer that originates at the CCCI Site.

Respondents shall notify EPA, as early as possible before such a change is made, but in no case less than 24 hours before such a change. The initial notification may be made orally but it shall be promptly followed by a written notice.

2. Work to Be Performed

Respondents shall perform the following removal actions:

a. Immediately control access to the Site by repairing and/or constructing fences, and provide appropriate Site security during implementation of the Work Plan;

b. Conduct an inventory of the drums found on-Site, and overpack or cover leaking drums and containers;

c. Perform sampling and analyses of all drums, tanks, soil, pits, lagoons, asbestos, drums of laboratory chemicals, cooling towers, and any other identified areas, as per the OSC. This shall include the collection of samples from each container and compositing of samples into appropriate waste streams, including, but not limited to chromium-contaminated soils, flammable and combustible liquid waste, cyanide liquid and solid waste, acid liquid and solid waste, corrosive liquid and solid waste, and any other identified waste stream for analysis of disposal parameters. Appropriate samples shall also be sent to waste facilities that are in compliance with the CERCLA off-Site Rule;

d. Clean, cut and scrap all metal tanks, cooling towers, pipe and any other clean iron found on-Site.

e. Perform hazard categorization (hazcatting) analyses to assess the viability of bulk-loading and disposal of the liquid and solid waste. Segregate drums and containers into compatible waste streams based on hazcatting analyses and dispose of them in accordance with applicable regulations.

f. Conduct an extent of contamination study in the eastern one-third of the Site that lies roughly between the Elgin, Joliet and Eastern Railroad

Respondents shall perform the removal actions required by this Order themselves or retain contractors to implement the removal actions. Respondents shall notify EPA of Respondents' qualifications or the name and qualifications of such contractors, whichever is applicable, within 5 business days of the effective date of this Order. Respondents shall also notify EPA of the name and qualifications of any other contractors or subcontractors retained to perform work under this Order at least 5 business days prior to commencement of such work. EPA retains the right to disapprove of the Respondents or any of the contractors and/or subcontractors retained by the Respondents. If EPA disapproves a selected contractor, Respondents shall retain a different contractor within 25 business days following EPA's disapproval and shall notify EPA of that contractor's name and qualifications within 30 business days of EPA's disapproval.

Within 5 business days after the effective date of this Order, the Respondents shall designate a Project Coordinator who shall be responsible for administration of all the Respondents' actions required by the Order. Respondents shall submit the designated coordinator's name, address, telephone number, and qualifications to EPA. To the extent practicable, the Project Coordinator shall be present on-Site or readily available during Site work. EPA retains the right to disapprove of any Project Coordinator named by the Respondents. If EPA disapproves a selected Project Coordinator, Respondents shall retain a different Project Coordinator within 15 business days following EPA's disapproval and shall notify EPA of that person's name and qualifications within 20 business days of EPA's disapproval. Receipt by Respondents' Project Coordinator of any notice or communication from EPA relating to this Order shall constitute receipt by (all) Respondents.

The EPA has designated Steven J. Faryan of the Emergency Response Branch, Region 5, as its On-Scene Coordinator (OSC). Respondents shall direct all submissions required by this Order to the OSC at 77 West Jackson Blvd., Chicago, Illinois 60604-3590 (Mail Code: HSE2-5J), by certified or express mail. Respondents shall also send a copy of all submissions to Cynthia N. Kawakami, Associate Regional Counsel, 77 West Jackson Boulevard, (Mail Code: C-14J), Chicago, Illinois, 60606-3590. All Respondents are encouraged to make their submissions to EPA on recycled paper (which includes significant post-consumer waste paper content where possible) and using two-sided copies.

EPA and Respondents shall have the right, subject to the immediately preceding paragraph, to change their designated OSC or Project Coordinator. EPA shall notify the Respondents, and

present at the Site due to the existence of a tank containing acetone with a flash point of 65 degrees that has a propensity for fire and explosion, and which has the ability to react violently with oxidizing materials.

g. other situations or factors that may pose threats to public health or welfare or the environment; this factor is present at the Site due to the existence of vandalism problems, as evidenced by the missing sections of fencing around the Site that could facilitate easy access to the Site (and hazardous substances) by humans and animal populations. In addition, the three vertical tanks full of acid and caustic liquids have easily accessible valves which could be opened and, subsequently, allow the release of hazardous substances into the environment. These acid liquids, if released, could react with cyanide-contaminated soils and drums containing cyanide, causing the creation and release of hydrogen cyanide, an extremely poisonous substance and chemical asphyxiant.

7. The actual or threatened release of hazardous substances from the Site may present an imminent and substantial endangerment to the human health, welfare, or the environment within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

8. The removal actions required by this Order are necessary to protect the human health, welfare, or the environment, and are not inconsistent with the NCP or CERCLA. The removal actions required by this Order are necessary to protect the public health, welfare, or the environment.

V. ORDER

Based upon the foregoing Findings of Fact, Conclusions of Law and Determinations, it is hereby ordered and agreed that Respondents shall comply with the following provisions, including but not limited to all documents attached to or incorporated into this Order, and perform the following actions:

1. Designation of Contractor, Project Coordinator, and On-Scene Coordinator

a. actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, pollutants or contaminants; this factor is present at the Site due to the existence of deteriorating tanks containing acids and cyanide; loose friable asbestos; cyanide in surface impoundments; and five uncontrolled packs containing laboratory chemicals.

b. actual or potential contamination of drinking water supplies or sensitive ecosystems; this factor is present at the Site due to surface drainage patterns that direct contaminated surface runoff towards a wetlands located directly south of the Site, and the discharge of contaminated groundwater to the unnamed drainage ditch which is also located to the south of the Site and flows to the Grand Calumet River.

c. hazardous substances, pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release; this factor is present at the Site due to the existence on-Site of at least 175 drums and 12 tanks containing acid and caustic liquids, and drums containing cyanide.

d. high levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate; this factor is present at the Site due to the existence of significant concentrations of PCB-contaminated soil, and chromium-contaminated soil that are at or near the surface.

e. weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released; this factor is present at the Site due to the existence of severe cold-weather conditions, (including snow, icing, freeze-thaw phenomena and extreme cold temperatures) in the fall and winter seasons. These conditions could adversely affect the tanks, drums, surface impoundments, and contaminated soils, all of which are exposed to the elements.

f. threat of fire or explosion; this factor is

monies for the aforementioned cleanup of PCB-contaminated wastes are currently held in a special account for the CCCI Site.

IV. CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the Findings of Fact set forth above, and the Administrative Record supporting these removal actions, EPA has made the following Conclusions of Law and Determinations, which Respondents do not admit:

1. The CCCI Site is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

2. Cyanide, PCBs, asbestos, chromium, lead, acid liquids and sludges, caustic liquids and sludges, acetone, dichloromethane, trichloroethene, isophorone, 1,1,1-trichloroethane, trichloroethene, toluene, 1,2-dichlorobenzene, 2-methylnaphthalene, naphthalene, tetrachloroethene, 1,1-dichloroethane and benzene are "hazardous substances" as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

3. Each Respondent is a "person" as defined by Section 101(21)of CERCLA, 42 U.S.C. § 9601(21).

4. The Conservation Chemical Company of Illinois, Inc. and Norman Hjersted are the present "owners" and "operators" of the CCCI Site, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20). Respondents listed in Attachment A are persons who arranged for the disposal or the transport for disposal of hazardous substances at the Conservation Chemical Company of Illinois Site. Each Respondent therefore may be liable under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

5. The conditions described in the Findings of Fact above constitute an actual or threatened "release" of a hazardous substance from the facility into the "environment" as defined by Sections 101(8) and (22) of CERCLA, 42 U.S.C. §§ 9601(8) and (22).

6. The conditions present at the Site constitute a threat to human health, welfare, or the environment based upon the factors set forth in Section 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan, as amended ("NCP"), 40 C.F.R. § 300.415(b)(2). These factors include, but are not limited to, the following:

hazardous wastes on-Site, including, but not limited to acetone, asbestos, benzene, cyanide, 1,2-dichlorobenzene, 1,1-dichloroethane, dichloromethane, isophorone, lead, 2-methylnaphthalene, naphthalene, polyaromatic hydrocarbon (PAH) compounds, sludge material demonstrating the characteristic of toxicity for chromium, tetrachloroethene, 1,1,1-trichloroethane, trichloroethene, and toluene.

9. On September 28, 1994, EPA issued a General Notice of Potential Liability for the CCCI Site to over two hundred Potentially Responsible Parties (PRPs), including the owner/operator of the Site and a number of generators. EPA's review of documents such as bills of lading and receipts, demonstrated incoming disposal transactions between the CCCI Site in Gary, Indiana and the named generators, and provided the basis for linking the generators to the Site.

10. On August 30, 1996, EPA entered into a final *de minimis* settlement with 153 *de minimis* PRPs at the CCCI Site. Under the Administrative Order on Consent for that *de minimis* settlement, the settling parties agreed to make settlement payments that included each settling party's fair share of the past and estimated future response costs at the Site, plus a premium assessed against estimated future response costs to account for potential cost overruns, the potential for failure of the selected response action to clean up the Site, and other risks.

11. In mid-January 1997, EPA issued a General Notice of Potential Liability to each Respondent listed on Attachment A to this Order, along with a draft of this Order and invitation to engage in settlement discussions.

12. "Other PCB-contaminated material" shall mean any PCB-contaminated media containing in excess of 50 ppm PCBs and not associated with or derived from the PCB-contaminated oils formerly contained in Tank No. 22, and/or the PCB-contaminated waste pile as defined in Section III., Paragraph 13.

13. Following the effective date of this Order, U.S. EPA, and not the Respondents to this Order, will plan and conduct the cleanup of the PCB-contaminated waste pile. For purposes of this Order, the "PCB contaminated waste pile and adjacent area" shall mean the approximate 5,000 cubic yards of PCB-contaminated waste, the area around former tank number 22, and the area where the PCB-containing materials were removed from Tank 22 and mixed with soil and lime. The Agency's cleanup of the aforementioned PCB-contaminated wastes is being funded by a portion of the monies that were collected from a prior *de minimis* settlement. The

5. In connection with the removal activities described above, the Agency disposed of 187,948 gallons of PCB-contaminated oil; 214.78 tons of PCB-contaminated soil; 1,941 gallons of liquid hazardous waste; 60 tons of hazardous waste solids; 15,300 gallons of flammable waste liquid; 112 gallons of flammable waste solid; 1,760 gallons of waste chromic acid; 2,960 gallons of non-hazardous solid; 74 cubic yards of contaminated debris; and 51,600 pounds of silicon tetrachloride.

6. On September 27, 1985, EPA issued a CERCLA Section 106(a) Unilateral Administrative Order (UAO) to the owner-operator of the Conservation Chemical Company of Illinois, Inc. and 18 generator-potentially responsible parties that were associated with the Site. A supplemental UAO was issued by EPA to the same Respondents on November 22, 1985. Pursuant to the UAOs, a group of the generator-potentially responsible parties conducted limited, but significant removal activities at the Site, including constructing a fence around a portion of the Site for security purposes, removal and off-Site disposal of acids from 4 tanks; removal and off-Site disposal of acid sludge from 1 tank; removal and off-Site disposal of cyanide from 13 tanks; and dismantling a tower used to store cyanide and off-Site disposal of the tower's cyanide-contaminated building materials.

7. EPA's TAT conducted a Site Assessment in 1994 to document the remaining threats at the CCCI Site, and found several imminent and substantial threats to the environment. The TAT documented 12 non-empty deteriorating tanks containing acids and solvents; a number of corroded empty tanks with acid and caustic residue; a number of drums containing acids and caustic liquids; a number of empty drums with acid and caustic residue; soil contaminated with hazardous substances; lagoons/sludge pits containing hazardous substances; 5000 cubic yards of PCB-contaminated soil; five uncontrolled packs containing laboratory chemicals; 20 cubic yards of asbestos-containing materials; contaminated waste oils; and contaminated groundwater. Geoprobe testing by the TAT confirmed the presence of a floating layer of contaminated material in the shallow aquifer, located approximately 10 feet under the surface. Although this shallow aquifer itself is not used as a source of drinking water, it flows to the unnamed ditch located on the Gary Airport property, and, eventually, to the Calumet River. Further, the TAT found that human and animal populations had access to the Site and hazardous substances located on-Site because there were sections of fencing missing around the Site.

8. Analytical testing of waste samples taken during that Site Investigation revealed the presence of hazardous substances and

a 4.1-acre, triangular-shaped piece of land in Gary, Indiana. The Site is situated north of and adjacent to the Gary Municipal Airport's main runway, and is bounded by the Western Scrap property to the north, the Elgin, Joliet and Eastern Railroad tracks to the south, and a wetlands to the west. The Site is not on the National Priorities List, 40 C.F.R. § 300, Appendix B.

2. Prior to 1967, the property was owned by the Berry Oil Company which operated an oil refinery at the Site. In 1967, Norman Hjersted, President of the Conservation Chemical Company of Illinois, Inc., acquired the property described above from the Berry Oil Company. From 1967 through 1985, the Conservation Chemical Company of Illinois, Inc. conducted operations at the Site, including storing and treating spent acids, oils, and solvents, operating as a producer of ferric chloride, and operating as a hazardous waste terminal and treatment facility for cyanide, organic solvents, plating waste and waste oils. The Conservation Chemical Company of Illinois, Inc. ceased operations in 1985.

3. Hazardous substances have been or are threatened to be released into the environment at the CCCI Site. In February 1985, EPA's Technical Assistance Team (TAT) conducted a Site Assessment and identified several imminent threats to human health and the environment. They found 13 tanks of cyanide waste with concentrations up to 19,000 part per million (ppm); free cyanide, totaling at least 184,531 gallons; 12 tanks of hydrochloric and sulfuric acid, totaling at least 413,500 gallons; one tank of at least 15 cubic yards of acid sludge; many severely corroded and leaking tanks and drums of acids, caustics, flammables, polychlorinated biphenyls (PCBs) and cyanide-contaminated materials; one tank containing silicon tetrachloride; two tanks containing an estimated 495,580 gallons of PCB-contaminated materials; and contaminated soils.

4. As a result of the release or threatened release of hazardous substances into the environment, EPA has undertaken response actions at the Site under Section 104 of CERCLA, 42 U.S.C. § 9604. From October 1985 through September 1990, EPA conducted limited, but substantial removal activities at the Site, including, construction of a fence to secure the Site; excavation, sampling and off-Site disposal of buried drums containing hazardous substances; consolidation of hazardous waste from severely deteriorating and leaking drums and tanks and placement into more structurally sound tanks on-Site; and off-Site disposal of solid and liquid hazardous waste from certain tanks and drums.

Respondents' participation in this Order shall not constitute an admission of liability or of EPA's findings or determinations contained in this Order except in a proceeding to enforce the terms of this Order. Respondents agree to comply with and be bound by the terms of this Order. Respondents further agree that they will not contest the basis or validity of this Order or its terms.

Respondents specifically deny that they have ever been identified as having sent PCBs to the CCCI Site or that they have any liability whatsoever for PCBs at the Site other than as voluntarily agreed to herein in order to advance the resolution of this matter.

EPA does not necessarily agree with Respondents' denial of liability for PCBs at the Site. In the interest of advancing the resolution of this matter, however, EPA recognizes that the issue of Respondents' liability for the PCBs at the Site need not be resolved on or before the effective date of this Order. The issue of Respondents' liability for PCBs may be addressed by EPA at some future time, if the reopener provisions in Section V are exercised by the Respondents.

II. PARTIES BOUND

This Order applies to and is binding upon and inures to the benefit of EPA, Respondents and Respondents' heirs, receivers, trustees, successors, and assigns. Any change in ownership or corporate status of Respondents including, but not limited to, any transfer of assets or real or personal property shall not alter such Respondents' responsibilities under this Order. Respondents are jointly and severally liable for carrying out all activities required by this Order. Compliance or noncompliance by one or more Respondents with any provision of this Order shall not excuse or justify noncompliance by any other Respondent.

Respondents shall ensure that their contractors, subcontractors, and representatives comply with this Order.

III. FINDINGS OF FACT

Based on available information, including the Administrative Record in this matter, EPA makes the following Findings of Fact, which Respondents do not admit:

1. The Conservation Chemical Company of Illinois, Inc. Site is

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:	)	Docket No. V-W-'98-C-497
	)	
CONSERVATION CHEMICAL COMPANY OF ILLINOIS, INC., GARY, INDIANA	)	ADMINISTRATIVE ORDER BY CONSENT PURSUANT TO SECTIONS 106 AND 122(h) OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980, as amended, 42 U.S.C. §§ 9606(a) and 9622(h).
Respondents:	)	
Listed in Attachment A	)	

I. JURISDICTION AND GENERAL PROVISIONS

This Order is entered voluntarily by the United States Environmental Protection Agency ("EPA") and the Respondents. The Order is issued pursuant to the authority vested in the President of the United States by Sections 106(a), 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. §§ 9606(a), 9607 and 9622. This authority has been delegated to the Administrator of the EPA by Executive Order Number 12580, 52 Federal Register 2923 (Jan. 29, 1987), and further delegated to the Regional Administrators by EPA Delegation Numbers 14-14-A, 14-14-C and 14-14-D. The Regional Administrator redelegated authority under Section 122 to the Director, Superfund Division, Region 5, by EPA Region 5 Delegation Number 14-14-D, May 2, 1996.

This Order provides for performance of removal actions at property located at 6500 Industrial Highway, Lake County, Gary, Indiana, known as the Conservation Chemical Company of Illinois, Inc., (the "CCCI Site" or the "Site"), and reimbursement of response costs incurred by the United States in connection with these removal actions. This Order requires the Respondents to conduct removal actions described herein to abate an imminent and substantial endangerment to the public health, welfare or the environment that may be presented by the actual or threatened release of hazardous substances at or from the Site. A copy of this Order will also be provided to the State of Indiana, which has been notified of the issuance of this Order pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

C-14J

June 8, 1999

Becky Eifert, Esq.
Indiana Department of Environmental Management
OSHWM
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206

Re: Conservation Chemical Company of Illinois, Inc.; Administrative Order By Consent

Dear Becky:

Thank you for your telephone call today. Enclosed, please find a copy of a final Administrative Order By Consent for the Conservation Chemical Company of Illinois, Inc. Site (CCCI Site), that was signed by the major Potentially Responsible Parties and the U.S. EPA.

I appreciate your willingness to assist U.S. EPA in getting the funds in the CCCI Trust Fund released to U.S. EPA for its use in cleaning up the CCCI Site under Superfund. If you have any questions, or need further information, please do not hesitate to contact me at (312) 886-0564.

Sincerely,

Cynthia N. Kawakami
Associate Regional Counsel

F.H.

to be collected in removal Drums and stored, pending, verification of the initial limited sampling for hazardous components.

2. Contamination of ground water by oil seepage is acknowledged from a leak in Tank 19, and, there may be other sources. Tank 19 should be emptied and abandoned at the earliest practicable date. In any event, oil collection equipment should be installed at the existing seepage pit, and recovery or disposal arranged.

Sampling and Analysis

The following recommendations outline a program of sampling and laboratory analysis, to be carried out within the scope of the present study. Permissions from Conservation Chemical Co., or the owners of adjacent property are needed before we can proceed with these steps.

1. Monitoring gas emissions from eruptions on the pre-shaped basin and, if possible, identification of the source material.

2. Sampling of acid contaminated soil, to guide the choice of removal versus insitu neutralization for remedial action.

3. Soil sampling elsewhere on the property, particularly in the vicinity of process units, tanks and drum storage areas, to define the extent and severity of contamination and evaluate potential for future contamination of surface water and ground water.

4. Ground water monitoring using new wells within the site boundaries to determine whether the ground water contamination already noted originates on the Conservation Chemical Co. site.

5. Inspection of tanks, process units and drums and sampling of stored material to assess potential salvage and recovery versus disposal.

Grand Calumet River. The source and extent of the oil contamination cannot be assessed without additional test pits or soil boring.

Groundwater contamination due to leaching of hazardous materials from abandoned piping is possible. There may be buried pipes from the refinery virtually anywhere on the site, as has been our experience elsewhere at similar facilities. Electromagnetic instrumentation (magnetometers or eddy current) could be used for a surface (remote sensing) survey mapping of the buried piping system. However, it is not recommended to undertake such a survey unless actual leakage occurs affecting groundwater or surface water.

RECOMMENDATIONS

Remedial Actions

Definitive recommendations concerning remedial action on the part of the Gary Municipal Airport Authority are delayed, pending resolution of disagreements between the Airport Authority and Conservation Chemical Co. concerning the scope of sampling programs on their property. The initial recommendations summarized below are subject to modification and additional recommendations, based on results of the additional sampling program.

1. Solids contained in the pie-shaped basin are mechanically unsuitable for the runway and taxiway extension and should be removed to a depth of at least 6 feet. The gas sampling and analysis recommended below should be carried out before any excavation activities, to define the hazards associated with gas eruptions. During the removal, solid materials will have

Observations of groundwater levels noted in Table 4 indicate an apparently significant west to east gradient as well as the expected north to south down-gradient direction for ground water flow (toward the Grand Calumet River) on both sides of the Conservation Chemical Co. property. Additional observations at these and other wells on adjacent property are needed to establish definitive directions for groundwater flow. Pending those results, it would be premature to speculate as to whether the groundwater contamination does or does not originate on the site.

However, it is definite that groundwater on the Conservation Chemical Co. site has been contaminated with oily material, at least at the oily seepage location designated on Figure 2. A backhoe pit excavated by the Company in February, 1983 to a 5.5-foot depth (elevation 586±) filled with oily seepage and had a thick surface layer of oily material when sampled. (Conservation Chemical Co. verbally granted permission for this sampling.) Subsequent chemical analyses showed no detectable quantities of either pesticides or PCB's. The report from the testing laboratory is appended.

It remains to be evaluated whether this oily seepage is related to fuel oil leakage losses from Tank 19 mentioned by the company, or the oil saturated soil encountered in boring the western wells near Tank 19 or to oily seepage observed due east of the pit (apparently through an outcrop in the eastern side of the railroad embankment), into a drainage ditch on airport property which eventually discharges into the

TABLE 4

RESULTS OF GROUNDWATER MONITORING
June 27, 1983

	Well Locations (See Figure 2)			
	West Side of Site		East Side of Site	
	Northwest	Southwest	Eastern	Southern
Surface Elevation	593.7	594.2	589.7	591.0
Water Level at Sampling	586.9	586.6	584.8	584.0
Sample Characteristics	base-reactive (white)	acid-reactive (black)	yellow; and turbid	yellow, turbid, foul odor
HAZARDOUS MATERIAL CONCENTRATIONS				
Volatile Organics, ug/l				
Benzene	35	N/D[a]	N/D	N/D
1,1-Dichloroethane	24	36	N/D	N/D
1,2-Dichloroethane	1,600	200	N/D	N/D
Methylene chloride	N/D	45	N/D[b]	N/D
Vinyl chloride	12	10	11	N/D
Acid Extractable Organics	N/D	N/D	N/D	N/D
Base/Neutral Extractable Organics ug/l				
Isophoric	38	24	N/D	N/D
Pesticides/PCBs	N/D	N/D	N/D	N/D
Inorganics, mg/l[c]				
Arsenic	N/D	.2	N/D	N/D
Beryllium	N/D	.02	N/D	N/D
Cadmium	N/D	.06	N/D	N/D
Chromium	.01	N/D	N/D	N/D
Copper	N/D	.2	N/D	N/D[d]
Mercury	.0008	.003	.002[d]	.0004[d]
Nickel	1.1	.9	N/D	N/D
Silver	N/D	.2	N/D	N/D
Thallium	N/D	.6	N/D	N/D
Zinc	N/D	.2	N/D[e]	N/D[c]
Cyanide	.15	.5	N/D[f]	N/D[d]
Phenols	N/D	.2	.028[g]	.06[d]

a) Below detection limit.
b) Detected at 14 ug/l in initial sampling (Table 3).
c) Antimony, Lead and Selenium not detected in any sample tested.
d) Not detected in initial sampling (Table 3).
e) Detected at .23-.24 mg/l in initial sampling. (Table 3)
f) Detected at .9 mg/l in initial sampling. (Table 3)
g) Detected at .31 mg/l in initial sampling. (Table 3)

TABLE 3

RESULTS OF INITIAL GROUND WATER SAMPLING
March 4, 1983

	Well Locations[a]		Comparison Criteria	
	Eastern	Southern	Detection Limit	Drinking Water Standard
Volatile Organics				
Methylene chloride, ug/l	14	N/D	10	--[b]
Acid Extractable Organics	N/D[c]	N/D	25-250	var[d]
Base-Neutral Extract Organics	N/D	N/D	10-25	var
Pesticides/PCB's	N/D	N/D	10	var
Inorganic				
Cyanides, mg/l	.01	N/D	.01	.01
Phenols, mg/l	.31	N/D	.01	.001
Heavy Metals[e]				
Zinc, mg/l	.24	.23	.02	5.0

a) Refer to Figure 2
b) No applicable standard c) Below detection limit
d) Varies for different contaminants
e) Other heavy metals (Antimony, Arsenic, Beryllium, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Silver and Thallium) were below their detection limit.

plant vicinity. However, groundwater contaminant migration may release hazardous materials into the Grand Calumet River or Lake Michigan (1).

Groundwater monitoring wells were placed outside the site but near the property lines, as shown on Figure 2. Two wells are located on airport property, directly across the railroad embankment from the southern and eastern apex points of the triangular property. Two wells on the western side of the site are located on Elgin, Joliet and Eastern Railroad right-of-way. The railroad's letter granting permission for the soil boring and subsequent groundwater monitoring is included in the Appendix. (Permission was also requested of Conservation Chemical Co. and adjacent property owners for such wells on their property, but was not granted.) The water table at the western wells was encountered below apparently oil saturated soil. The ground water at the eastern and southern wells was yellowish and turbid, indicating probable contamination.

Analysis of the groundwater samples, as summarized in Tables 3 and 4, showed detectable concentrations of volatile chlorinated organic solvents, cyanides, phenols and heavy metals. Comparison of concentrations observed at the east side wells in March 1983 (Table 3) and in June 1983 (Table 4) shows some decrease in contamination over the four months between sampling. Groundwater on the western side of the site, as seen in Table 4, is more contaminated than on the eastern side, with generally higher concentrations and a larger number of priority pollutants detected.

this until after completion of field activities for this study.

Soil contamination elsewhere on the site is a definite possibility. The most likely areas are in the vicinity of process units and tanks that have contained hazardous materials and drums suspected of containing hazardous materials, as indicated previously. Soil in the path of the taxiway extension must be tested for acidity and other chemical contamination, which would require off-site disposal for any such soil removed for grading.

Surface Water Contamination

Runoff of surface water containing oily material has been noted in an airport drainage ditch adjacent to the railroad embankment that forms the southeastern property line between the Airport and Conservation Chemical Co. It has been speculated that this may originate on the project site, but definitive information is lacking.

Conservation Chemical Co. acknowledges excessive acidity in ponded surface water in the area to the south of Tank 19, as noted previously under soil contamination. The company presently neutralizes the surface water by pouring on soda ash powder.

Groundwater Contamination

Some degree of groundwater contamination from past and present activities at the Conservation Chemical Co. site is likely, but it remains to be determined whether this is significant. The shallow groundwater aquifer (the Calumet aquifer) is not a significant water resource, and there are no known residential wells using it in the

IDENTIFICATION OF OTHER HAZARDOUS WASTE PROBLEMS

Contamination of soil and the resultant present and future contamination of ground water and surface water runoff must be considered, in addition to the site preparation activities necessitated by hazardous waste materials discussed previously. Because of the limited potential for worker or resident exposure to toxic hazards and the apparent absence of drinking water wells in the vicinity using the shallow groundwater aquifer, the principal concern is for contamination reaching the Grand Calumet River and/or Lake Michigan, the latter being the principal water supply for Gary and the northwestern Indiana - northeastern Illinois metropolitan area.

Soil Contamination

Conservation Chemical Co. has acknowledged soil contamination on the site. Pursuant to Agreed Findings of Facts and an Agreed Recommended Order adopted by the Stream Pollution Control Board of the State of Indiana on March 23, 1973, the Company agreed to cease and desist from "placing treated or untreated chemical wastes on the land," particularly in the diked areas around the large storage tanks.

The company presently monitors pH when ponding of surface water occurs in an area northwest of the bisecting railroad spur, between the pie-shaped basin and Tank 19 (See Figure 2.), and pours soda ash powder on, as necessary to neutralize excessive acidity. Insitu neutralization with lime or limestone will be required for the acid soil, but the extent and degree of acid contamination has not been determined. The company delayed granting permission for soil sampling needed to define

Structures

The pits marked in Figure 2 are usually filled with water. The southern pit, which is adjacent to the pie-shaped basin, has top elevation 592.0 feet and must be at least partially demolished for grading. The northern pit serves as the sump for drainage of the entire process area between the office/shop building and the railroad embankment. Neither of these pits showed a noticeable accumulation of oil during our site inspections and other on-site activities.

Under adverse circumstances the pits could concentrate contamination from surface water runoff or seepage leaking into them, and subsequently release the contamination under severe storm runoff conditions. Water collected in the pits should be sampled and analyzed for hazardous pollutants, as a check on present contamination of surface water and ground water. Both pits should be demolished and filled with clean soil, since they would present a safety hazard for Airport personnel quite independent of hazardous waste material exposure.

The office/shop building and other minor structures, including a roofed former loading area near the northern pit and a storage shed for scrap iron will be demolished, as necessary for compliance with the building limit. Soil borings should be taken near the pits and other structures, to check for contamination due to chemical spills.

However, it was not recommended since the technique has accuracy limitations and removal of at least five feet of surface materials at the top of the basin must proceed in any event to reach the grade level for the runway.

Some remedial action in the basin is certain to be required, but the nature of the action cannot be fully defined at present. The initial sampling of basin material was too limited in extent to define the amount of material to be removed beyond the grading requirement. Disposal elsewhere on the site or by landfill should be arranged for the solids removed from the basin. The remedial action must also eliminate or control the eruptions. Alternatives for remedial action in the basin are evaluated in the section on additional studies and remedial actions.

Tanks and Process Units

Conservation Chemical Company handles an estimated 15,000 tons/year of spent steel mill pickling liquor (Hazardous Waste No. K062), somewhat more than half of their nominal 25,000 gal/day process design capacity according to their hazardous waste permit application dated November 18, 1980. In addition to this "mainline" production, their application specifies 620,000 gallons of tank capacity and estimated annual quantities of other hazardous materials as follows:

Solvents - 260 tons

(F001) spent halogenated solvents and degreasing sludges
(F002) spent halogenated solvents and still bottoms
(F003) spent non-halogenated solvents and still bottoms
(F005) spent non-halogenated solvents and still bottoms

lettering that suggested reuse involving a hazardous material after the original contents had been consumed.

Our inspection found 35 "Recovery Drums" scattered about 6 different locations on the site. These distinctive yellow metal drums are marketed specifically as containers for damaged or leaking drums or spilled materials. The plant manager indicated that most of these held contaminated soil removed from the site after a solvent spill. Two of the three open Recovery Drums were seen to hold some soil. Disposal of the Recovery Drums will require determination of present solvent content.

Our inspection also revealed two drums containing chemistry laboratory reagent bottles, which could be seen through the severely rusted metal. Many of the visible reagent bottles contained solid residues. Disposal of these and other similar drums will require time consuming manual classification according to apparent hazard class.

Conservation Chemical Co. maintains that it will arrange for reclamation or proper disposal of all drums on the site prior to title transfer. On this premise, extensive sampling and analysis of materials stored in the drums would only be necessary if the Company is unable to fulfill their plan.

Soil at the drum storage areas noted on Figure 2, particularly near drums suspected of containing hazardous waste material, should be tested for contamination and removed if there is potential for leaching hazardous materials into the groundwater.

the tanks have been decontaminated adequately for conventional dismantling and off-site disposal. Also, soil in the tank areas must be sampled for contamination by chemical spillage.

Drums and Containers

Conservation Chemical Co. acknowledged the presence of about 300 drums on the site, including a few drums of ferric chloride product. The hazardous waste permit application of November 18, 1980 indicates 100,000 gallon total storage capacity for containers and notes that they planned to receive less than truckload quantities of hazardous materials in drums and accumulate some of them at the plant until a truckload quantity of compatible material could be assembled for shipment to an approved landfill. The Company also disclosed plans in some cases to de-drum and store hazardous waste materials in bulk until truckload quantities are accumulated for transportation to an approved treatment facility.

The EPA inspection on November 19, 1980 found drums at several locations on the site besides the designated main drum storage area, and noted some drums as being empty or "mostly empty". Our visual inspections in December, 1982, (carried out with the cooperation of the plant manager) found drums at essentially the same locations. The Main Drum Storage Area and two other areas northwest of the railroad spur have large numbers of drums, as noted on Figure 2. Many drums appeared to be empty or to contain only rainwater. Some of the metal drums were badly rusted or broken; in some drums the plastic liners were also broken. Labels on the drums were checked, particularly those with hand

and acidic baths. This is not to be taken as representative of present material, since inventory records indicate a net influx of 78,000 gallons of cyanides since 1979. The inventory records also indicate shifting of cyanide storage to tanks away from the ferric chloride processing area and possible accidental exposure to acids, which was a concern expressed in the EPA inspection. The Company acknowledged that the cyanides are not marketable, and their 1981 closure plan called for destruction of the cyanides by chlorination under alkaline conditions, to be carried out on site at an estimated cost of $25,000.

- Tank 20 contains 412,504 gallons of "neutral acid sludge" resulting from neutralization of waste pickling liquor. Analysis of the material reported to the Company by General Testing Laboratories, Inc. of Kansas City, Missouri on June 23, 1978 shows 27.5% solids (5.50% iron, 1.78% chromium, 1.06% copper, 0.42% zinc, 0.14% nickel and ppm quantities of lead and cadmium) and the liquid phase containing 40 ppm chromium, 75 ppm copper, 14 ppm nickel and lesser amounts of the other metals. The analysis, which is similar to that of the pie basin solids (See Table 2) suggests that the chromium and copper may be present as a result of mixing spent electroplating or etching baths with pickle liquor. The material is hazardous, but no mention of it is made in the closure plan.

- Fuel oil in Tanks 19 and 22 is probably marketable, although the presence of asphalt in Tank 22 may decrease its value. There is no mention of the fuel oil in the closure plan.

- Small quantities of corrosive materials (other than steel pickling liquor) were present as of the May 1981 inventories, including 8,000 gallons of waste nitric acid and 2,000 gallons of caustic. Subject to analysis for hazardous contaminants, there should be no problem in neutralization and disposal of these materials.

The tower and all storage tanks, being within the 750-foot building limit, must be demolished in any event. The Company maintains that all materials stored in tanks (except for the neutral acid sludge) is marketable and will be removed prior to the property being turned over to the Airport. On this premise, sampling and analysis of the tank contents should be a condition of the title transfer, to verify that

Electroplating waste sludges - 2000 tons

(F006) wastewater treatment sludges from electroplating, including sludge from neutralization of spent pickle liquor (K063).

Spent Plating Baths - 450 tons

(F007) spent electroplating baths
(F008) plating bath sludges (bottoms)
(F009) spent stripping and cleaning baths

The Company submitted its Closure Plan to EPA on July 2, 1981, as well as earlier inventories of stored materials dated March 12, 1979; May 26, 1981 and June 1, 1981. Based on this information, the record of an EPA inspection on November 19, 1980 and a Company site map sketch dated August 2, 1982, the list of storage and treatment tanks containing hazardous materials as of December 9, 1982, (or previously used for hazardous materials) in Table 1 was compiled, and their locations were shaded on Figure 2.

- The solvents consist of about 85,000 gallons of methylene chloride-hydrocarbon mixtures. Analysis of samples in tanks 2, 15 and 25, as reported to Conservation Chemical Co. by General Testing Laboratories, Inc. of Kansas City, Missouri, showed organic chloride content of 8.5% to 14.5%, apparently based on specific gravity measurements. This may not be representative of current material, since inventory records indicate a net influx of about 42,000 gallons of solvents since 1979. The Company maintains that all stored solvents are marketable and will be removed upon sale.

- The cyanides consist of about 150,000 gallons of low level plating wastes. Analysis of a partially solidified sample taken February 14, 1979 and reported to Conservation Chemical Co. in April, 1979 by General Testing Laboratories, Inc. of Kansas City, Missouri, showed the expected highly alkaline solution (pH 13.2) containing 1,187 mg/l zinc and 33 mg/l cadmium, as well as appreciable concentrations of nickel and chromium, which would suggest the origin of the waste as combined electroplating rinse wastewater from both cyanide

TABLE 2

HAZARDOUS MATERIAL CHARACTERIZATION OF PIE-BASIN SOLIDS

	ug/gram air dried solids	
	Concentration	Detection Limit
Organics		
Acid extractables		2-20
Phenol	11	2.0
Base Neutral extractables	N/D[a)]	10-25
Pesticides/PCB's	N/D	10
Inorganics		
Cyanides	30	0.15
Phenols	10	0.4
Heavy metals		
Antimony	4.9	0.05
Arsenic	0.58	0.05
Beryllium	1.5	0.02
Cadmium	11	0.02
Chromium	12,300	0.1
Copper	5,100	0.1
Lead	170	0.2
Mercury	0.33	0.0002
Nickel	660	0.1
Selenium	N/D	0.05
Silver	10	0.06
Thallium	0.31	0.05
Zinc	980	0.02

a) Below Detection Limit

alternate technique enabled us to sample the solids from the limited zone described above, using a post-hole auger mounted at the end of a boom deployed from a truck backed up to the north edge of the basin. A single composite sample, believed to be representative of the top six feet for the entire basin, was produced and submitted for analysis to determine priority pollutants (except for volatile organic constituents). The results, as shown in Table 2, indicate high concentrations of phenols and heavy metals, as would be expected for solids in a lagoon used for disposal of refinery waste emulsion and neutralized steel mill pickling liquor. The complete analytical report is reproduced in the Appendix. The material is hazardous and will require off-site disposal at a hazardous waste disposal sites or chemical fixation treatment to permit on-site disposal.

The eruptions are difficult to explain except as gas emissions from buried materials, which may be either gases released by reactive material in buried containers upon contact with water, or by decomposition of putrescible material. The employees' remarks suggested that eruptions occur only during the warmer months, but we noted apparently fresh eruptions at midwinter. Sampling of the atmosphere inside fresh eruption holes would be needed to provide definitive identification of any gases evolved. Permission for such sampling was requested of Conservation Chemical Co., but is still pending.

A preliminary survey with remote sensing electromagnetic instruments (e.g., magnetometers) was considered, to resolve the question of buried reactive waste containers as a source of the eruptions.

a settling lagoon for disposal of hazardous waste materials. Its surface is elevated about four feet above the main plant area, apparently to ensure infiltration into the relatively high water table. Conservation Chemical Company estimated the surface impoundment volume at 600,000 gallons and the annual quantities as 500 tons of sludge resulting from lime treatment of spent steel mill pickle liquor (Hazardous Waste No. K062) and 2,100 tons of slop oil emulsion solids from petroleum refining (Hazardous Waste No. K049).

The surface material at the top of the basin consists mainly of very fine orangish solids (assumed to be principally ferrous hydroxide). The surface is flat except for "eruption" holes 6-12 inches in diameter, which are surrounded by small mounds of solids suggestive of large gas bubbles escaping through the mass of solids. The material has essentially no load bearing strength, and it was observed to yield readily at low stress. The employees refer to it as "quicksand" and tell of finding very deep footprint impressions of trespassers who walked across the basin. In sampling the basin solid materials, we found it possible to stand on the basin surface only with the aid of a wooden pallet to distribute weight over a large area.

The sampling of basin solids was limited to a ten foot wide zone across the northern end and to a depth of about six feet. Solid material from the five to six-foot depths appeared to be darker and more gritty than the surface solids. The samples were not obtained as discrete cores, since conventional soil boring rigs and hollow augers could not be used because of the basin material consistency. An

that some of these are "Recovery Drums" containing contaminated soil removed after a solvent spill.

The following sections describe problem areas at the site, based on sampling and analysis and visual inspection activities carried out by Havens and Emerson on behalf of the Airport Authority, supplementary information supplied by Conservation Chemical Co. and information on the Company from U.S. Environmental Protection Agency files released through Freedom-of-Information requests. (Copies of documentation and analytical laboratory reports are included in the Appendix.) Sampling activities on the site allowed by the Company were limited to test borings in the pie-shape basin, and the oily seepage into their backhoe pit. (Conservation Chemical Co. later granted permission for hand auger soil boring and analysis of samples so derived, however, after completion of the field activities in this study.)

The presentation of problem areas first considers the pie-shaped basin and soil contamination in adjoining areas directly in the path of the runway extension, proceeds to the disposition of tanks and drums containing hazardous materials and concludes with a discussion of present and potential future contamination of surface water and ground water. Following this, the conclusions of the present study and recommendations for further investigation and/or remedial action are summarized.

Pie-Shaped Basin

The area at the southern apex of the property, between the railroad spur and the foot of the main railroad embankment has been used as

CONSERVATION CHEMICAL CO. ACTIVITIES

Conservation Chemical Co. has conducted operations at this site since April, 1967. The company manufactures iron salt coagulants, principally ferric chloride, by reaction of steel mill waste pickling liquor with chlorine and scrap iron. It is one of the principal suppliers nationwide of ferric chloride. The company is also a licensed transporter of hazardous materials. (IND 040888992).

The railroad spur which bisects the site is used for tank car loads of ferric chloride (product) as well as chlorine (raw material). Waste pickling liquor (raw material) is delivered by tank trucks entering over an unpaved road parallel to the spur. Activities connected with production of ferric chloride generally are limited to the process units and small storage tanks closest to the office/shop building.

Conservation Chemical Co. applied to the U.S. Environmental Protection Agency for hazardous waste storage permits on November 9, 1980. Their application acknowledged that other hazardous materials, including cyanides, chlorinated organic solvents, mixed copper-iron hydroxide sludge resulting from treatment of plating waste, and oily wastes have been stored in tanks at various locations around the site. (See Figure 2). The company maintains that these materials, like their current raw material and product inventory, are marketable and will be removed prior to acquisition of the site by the Airport Authority. The company also acknowledged that about 300 drums are stored on site, and

TABLE 1

CONSERVATION CHEMICAL COMPANY

LOCATION AND CONTENTS OF STORAGE/TREATMENT TANKS
(Continued)

The following information pertains to apparently abandoned tanks, which were included in previous inventories, but did not appear on the August 1982 site map.

Tank No.	Hazardous Contents (if applicable)	Previous Inventory	Capacity Gallons
6	Waste acid	1979 inventory	N/A
7	--	1979 inventory	N/A
8	--	1979 inventory	9,600+
10	Caustic	1979 and 1981	2,000+
18	Waste acid	1979 inventory	N/A
27	Hydrofluoric acid	1979 inventory	N/A
C-1	Cyanide	1979 and 1981	3,000
R-34	Previously copper	1979 and 1981	4,000
S-1	Cyanide	1979 and 1981	9,000

TABLE 1

CONSERVATION CHEMICAL COMPANY

LOCATION AND CONTENTS OF STORAGE/TREATMENT TANKS
(Continued)

Tank No.	Capacity Gallons	NW/SE from Hazardous Contents (if applicable)	Bisecting spur	Vicinity of major feature
F-1	N/A	-	NW	Tank 19
F-2	N/A	-	SE	Office/Shop Bldg.
F-3	N/A	-	SE	Office/Shop Bldg.
F-4	N/A	-	NW	Tank 19
MT	N/A	-	NW	Cooling Tower
R-1	N/A	-	NW	Tank 19
R-3	N/A	-	SE	Northern Pit
R-15	5,000	previously copper	SE	Tank 20
R-17	N/A	-	NW	Tank 22
R-20	N/A	-	NW	Cooling Tower
R-21	N/A	-	NW	Cooling Tower
R-30	6,000	previously pickle liquor	SE	Office/Shop Bldg.
R-31	8,000	waste acid	SE	Tank 20
R-33	1,600	previously copper	SE	Northern Pit
R-38	N/A	-	SE	Northern Pit
RR-1	7,500	previously cyanide	SE	Northern Pit
RR-2	7,500	Cyanide	NW	Tank 19
Sphere	9,000+	Cyanide	SE	Tower
ST-1	N/A	Cyanide	NW	Tank 19
Tower	19,650+	Cyanide	SE	-
TR-38	N/A	Cyanide	SE	Tank 20
WC	N/A	-	NW	Cooling Tower
X	N/A	-	NW	Office/Shop Bldg.

Note: + designates largest volume noted in inventory records as less than full.

TABLE 1

CONSERVATION CHEMICAL COMPANY

LOCATION AND CONTENTS OF STORAGE/TREATMENT TANKS

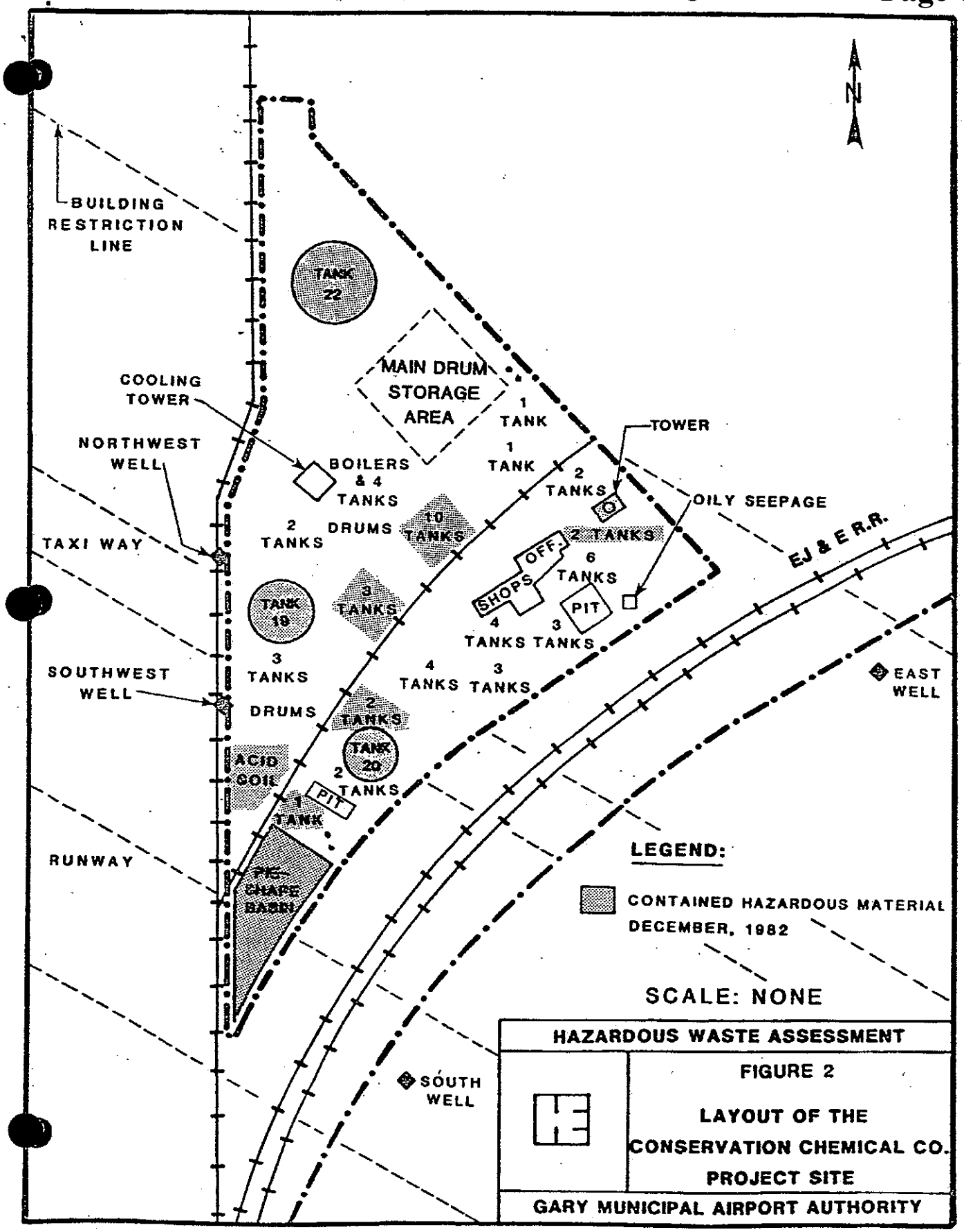
Based on Company sketch provided December 8, 1982 (dated August 22, 1982) and inventories dated June 1, 1981; May 26, 1981 and March 15, 1979.

Tank No.	Capacity Gallons	Hazardous Contents (if applicable)	NW/SE from Bisecting Spur	Vicinity of Major Feature
1	N/A	previously cyanide	NW	Tank 19
1-A	21,000	HCl pickle liquor(prev. copper)	SE	Office/Shop Bldg.
2	42,000	Solvent	SE	Office/Shop Bldg.
2-A	21,400	previously cyanide	SE	Office/Shop Bldg.
3	N/A	previously waste acid	SE	Tank 19
3-A	7,100+	-	NW	Office/Shop Bldg.
4(tub)	N/A	-	NW	Tank 22
4-A	21,400	Cyanide	NW	Office/Shop Bldg.
5(tub)	N/A	-	NW	Tank 22
5	3,000	Silica etch (acid)	SE	Northern Pit
6-A	N/A	Cyanide	NW	Office/Shop Bldg.
8-A	N/A	Cyanide	NW	Office/Shop Bldg.
11	N/A	previously caustic	NW	Office/Shop Bldg.
12	N/A	previously waste acid	SE	Northern Pit
14	N/A	prev. alkaline etch	SE	Office/Shop Bldg.
15	15,400	Solvent	SE	Tank 20
16	N/A	-	NW	Cooling Tower
19	143,250	Oil-Water Sludge	NW	--
20	412,504+	Neutral Acid Sludge	SE	--
22	711,753	Fuel Oil & Asphalt	NW	--
23	3,500+	previously cyanide	NW	Office/Shop Bldg.
25	17,094	Solvent	SE	Tank 20
26	15,000	Cyanide	SE	Tank 20
28	18,000	Cyanide	NW	Office/Shop Bldg.
41	N/A	-	NW	Office/Shop Bldg.
CB-1	1,700+	previously process waste	NW	Cooling Tower
CB-2	1,200+	previously copper	SE	Office/Shop Bldg.
CB-3	10,000+	-	SE	Office/Shop Bldg.
CB-4	12,500+	-	SE	Office/Shop Bldg.
CDU-1	N/A	- SE	Tank 20	
CY-1	18,000	previously cyanide	SE	Tank 20
D-1	10,900	Solvent(partially CH_2Cl_2)	NW	Office/Shop Bldg.
DB-1	N/A	Cyanide	SE	Tower
DT-3	N/A	-	NW	Tank 19
F-1	N/A	previously copper	SE	Office/Shop Bldg.

of this map is included in the Appendix.) Table 1 is an inventory of tanks and process units, which identifies those currently or previously containing hazardous materials.

The principal structural features shown in Figure 2 are the office/shops building, three large tanks, two concrete lined pits, a distillation column (tower) and a forced-draft cooling tower, all remnants of the original petroleum refinery. In addition, there are 53 smaller tanks and a number of process units and small structures within a 250-foot radius from the office/shop building, and about 300 drums, at the main drum storage area and at other locations scattered around the site. The pie shaped basin at the southern apex of the triangular site and the two pits located to the southwest of the railroad space appear to be remnants of the refinery wastewater treatment and disposal system.

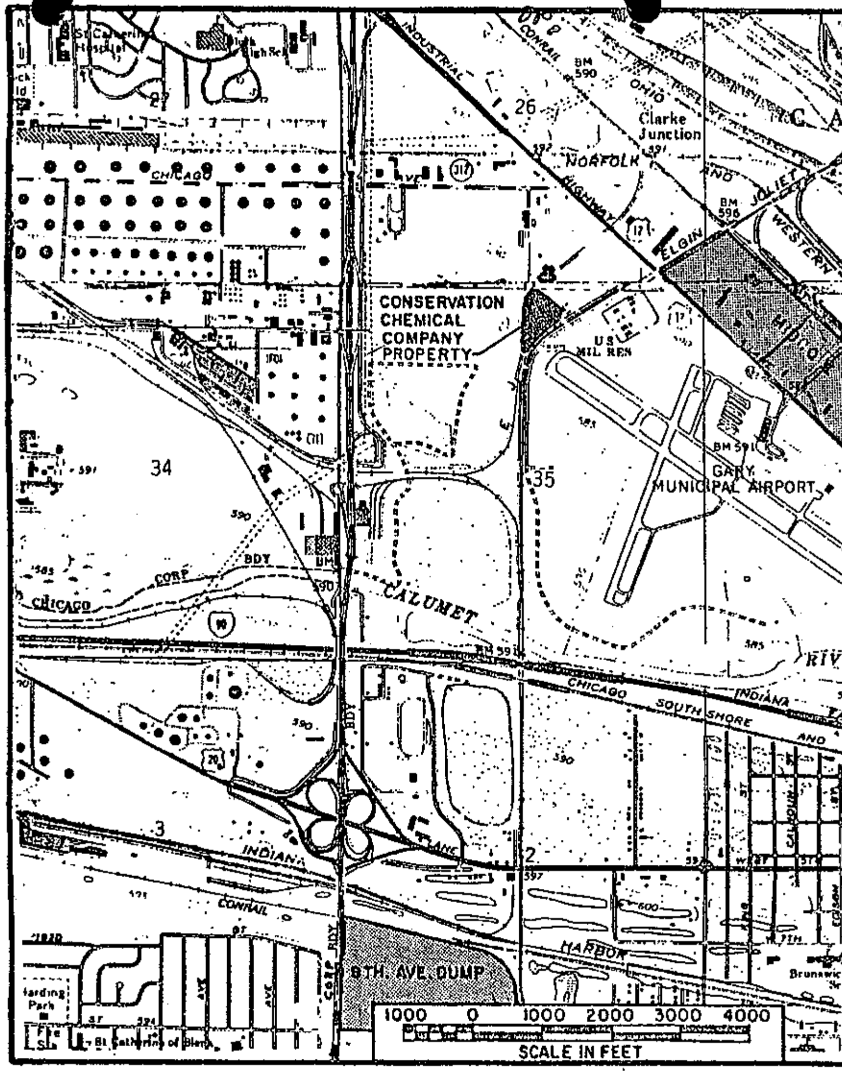
The southern portion of the site is directly in the path of the runway and taxiway expansion. The building restriction line 750 feet north of the runway center line passes near the northern site boundary. Besides the usual land clearance and site preparation, the proposed airport expansion project may also involve remedial actions for hazardous waste problems associated with past and present industrial activity on the site. The problems and proposed remedial actions are presented in detail, following delineation of current activities on the site with potential for hazardous materials and identification of other hazardous waste problems.


N
BUILDING RESTRICTION LINE
TANK 22
MAIN DRUM STORAGE AREA
1 TANK
1 TANK
2 TANKS
COOLING TOWER
NORTHWEST WELL
BOILERS & 4 TANKS
TOWER
OILY SEEPAGE
2 TANKS
DRUMS
10 TANKS
2 TANKS
OFF. SHOPS
2 TANKS
6 TANKS
TAXI WAY
EJ & E R.R.
TANK 19
3 TANKS
PIT
4 TANKS
3 TANKS
3 TANKS
4 TANKS
3 TANKS
SOUTHWEST WELL
EAST WELL
DRUMS
2 TANKS
ACID COIL
TANK 20
2 TANKS
PIT
1 TANK
RUNWAY
PIE-SHAPE BASIN
LEGEND:
CONTAINED HAZARDOUS MATERIAL
DECEMBER, 1982
SCALE: NONE
SOUTH WELL
HAZARDOUS WASTE ASSESSMENT
FIGURE 2
LAYOUT OF THE CONSERVATION CHEMICAL CO. PROJECT SITE
GARY MUNICIPAL AIRPORT AUTHORITY

the Grand Calumet River which is typically at elevation 582-583 feet (100-year flood elevation = 587.0 feet). However, owing to the railroad embankments, drainage on the project site is northward.

The area was a wetland prior to industrial development in the late 1800s and early 1900s. The original soils (where present) are sandy and characteristic of being at the lake bottom in former geologic times. The shallow groundwater aquifer (the Calumet aquifer), consists of highly permeable fine sand deposits extending about 10 miles southward from the Lake Michigan shoreline in the Gary vicinity. This unconfined aquifer ranges from 5 to 75 feet in thickness, averaging 20 feet, and is generally within 15 feet of the surface. It overlies nearly impermeable clay till averaging about 50 feet in thickness. The aquifer is not a significant source of water supply (1). However, it is regarded as particularly susceptible to contamination as it discharges the base flow for the Little Calumet River, the Grand Calumet River and their tributaries, as well as discharging either laterally into Lake Michigan or vertically through the underlying till into bedrock.

Figure 2 shows the Conservation Chemical Co. property in greater detail and designates approximate locations of the potential hazardous waste problems. (Figure 2, which is based upon information from other maps and aerial photographs provided by the Airport Authority and sketches provided by Conservation Chemical Co., has not been validated for accuracy. A detailed survey map of the southern half of the site and adjoining properties was developed as part of this study. A copy



HAZARDOUS WASTE ASSESSMENT

FIGURE 1

PROJECT LOCATION MAP

GARY MUNICIPAL AIRPORT AUTHORITY

SITE CHARACTERISTICS

Figure 1 shows the project location superimposed on U.S. Geological Survey topographic maps (Highland and Whiting quadrangles, Lake County, IN). The Conservation Chemical Co. property is a 4.1 acre triangular parcel just west of the existing Airport boundaries, and bounded on two sides by Elgin, Joliet and Eastern Railroad right-of-way. The planned 1,300-foot extension of Runway 12, the east-west runway, is seen to pass through the southern half of the Conservation Chemical Co. property and also to require relocation of the adjoining railroad tracks.

The immediate area has been heavily industrialized, with petroleum refineries and steel mills seen to the north and west and no residential areas within one mile. The Conservation Chemical Co. site and adjoining parcels were at one time the site of the Berry Oil Co. petroleum refinery. Three previously identified hazardous waste sites are within a short distance from the project location, the closest being MIDCO II which also borders Airport property on the north. The Ninth Avenue dump at the extreme south of the map is one of the 418 nationally designated priority action sites, and MIDCO I, just off the map on 15th Avenue, had initial remedial action under "Superfund" during 1982.

The topography in the area is relatively flat. Elevations on the site range from about 595 feet in the pie basin to 590 feet along the northeast boundary. (The runway elevation is 591.5 feet.) Natural surface water drainage elsewhere in this vicinity is southward, into

- Arrange feasibility tests for chemical fixation of solid materials from the pie-shaped basin and neutral acid sludge from Tank 20, to establish whether this can render these materials non-hazardous, to determine mechanical properties of the resultant solids and to refine cost estimates.

- Defer inspection of tanks, process units and drums and sampling of stored materials until the time of property transfer, to verify removal and decontamination by Conservation Chemical Co.

Our recommendations for remedial action are as follows:

- Remove solid material from the pie-shaped basin as necessary for grading the runway extension as well as to uncover and remove the source of eruptions. This will have to be done stage-wise, since the depth and volume of removal has not been determined precisely.

- Treat the material removed from the pie-shaped basin and neutral acid sludge from Tank 20 by chemical fixation, if the recommended study shows this to be feasible, and dispose of it on site; alternatively, arrange hauling and off-site landfill disposal with lime pretreatment as necessary for hauling stability.

- Neutralize the acid contaminated soil zone by addition of lime or limestone.

- Collect oily groundwater seepage at the existing unlined pit, separate the oil and arrange for reclamation or off-site disposal, if necessary.

- Decontaminate tanks and process equipment (if necessary), demolish and arrange salvage or off-site disposal.

originates on the Conservation Chemical Co. property without additional wells on their land.

- Oil-contaminated groundwater has been found on the site, seeping into pit excavated by Conservation Chemical Co. The source and extent of contamination cannot be determined without further excavation or soil boring. Although the oily material is free of hazardous components, some remedial action will be required.

- Tanks and process equipment in the path of the runway-taxiway extension must be dismantled and removed. Conservation Chemical Co. acknowledged in inventories filed with the U.S. Environmental Protection Agency that hazardous materials have been stored in their tanks and equipment, but they maintain that, with one exception noted below, these are marketable "materials in process" and will be removed prior to the title transfer.

- Tank 20 contains the admittedly unmarketable sludge resulting from neutralization of steel mill pickling liquor, which has characteristics similar to the solids at the top of the pie basin.

- Drums stored on the site, which potentially can add to soil and groundwater contamination, must be removed. Conservation Chemical Co. acknowledged in inventories filed with the EPA that some drums may contain hazardous materials, but maintains that those drums are "materials in process" which will be removed prior to the title transfer.

Our recommendations for additional studies, needed to define remedial actions, are as follows:

- Continue groundwater monitoring at the four wells installed in this study, in conjunction with other wells on adjacent property. This is needed for definitive judgment whether groundwater contamination does or does not originate on the site.

- Carry out limited soil boring on the site, particularly at the acid contaminated zone, in the path of the taxiway and in the vicinity of tanks, process units and drum storage. This is necessary for determination of existing soil contamination and potential future groundwater contamination.

- Sample eruption gases on the pie shaped basin, to define the source of eruptions.

The scope of activities at the site has been limited by disagreement between the Airport Authority and Conservation Chemical Co. regarding permissions for sampling from tanks and stored drums and soil boring. However, on the basis of limited groundwater monitoring using new wells located on adjacent property, as well as information provided by the Company and documents from EPA files, an initial assessment can be made concerning hazardous waste problems on this site. In brief, the anticipated problem areas which can affect the property acquisition by the Airport are as follows:

- The pie-shaped basin at the southern apex of the triangular site is a lagoon which has been used for disposal of slop oils and waste solids from neutralization of steel pickling liquor. A portion of this area is directly in the path of runway extension, and the unconsolidated solid material must be removed at least to a depth of six feet below the existing surface and replaced with clean fill to provide adequate soil mechanical properties. Removal operations will be complicated by possible "eruptions" and gas emissions originating below the six-foot depth and attributed to possible buried reactive waste or putrescible organic solids. Hazardous materials present in the solids will require costly ultimate disposal methods.

- An acid-contaminated soil zone adjoining the basin north of the railroad spur extends toward Tank 19. Conservation Chemical Co. presently pours soda ash on the soil, as necessary to neutralize ponded surface water. Portions of this soil may have to be removed for the taxiway extension.

- Contaminated soil may be present elsewhere on the site as a result of recent process chemical spills associated with the ferric chloride manufacturing activities, leakage or spills from tanks or drums containing hazardous material and residues of oil product spills dating from the refinery. In addition, leakage from buried abandoned piping may also contaminate the soil.

- Ground water monitoring at new wells (installed as part of this study) just outside the site shows contamination with chlorinated organics, cyanides, phenols and heavy metals. It is not possible to assess whether the contamination

GARY MUNICIPAL AIRPORT AUTHORITY

HAZARDOUS WASTE ASSESSMENT AT CONSERVATION CHEMICAL CO.

EXECUTIVE SUMMARY

Conservation Chemical Company of Illinois has conducted operations at a site west of the Gary Municipal Airport, which is planned for acquisition in an airport development project. The company manufactures iron salt coagulants, using waste pickling liquor from local steel mills as raw material.

The property apparently has been used for storage, treatment and/or disposal of hazardous material by Conservation Chemical Co. or by previous owners. Acquisition for the Airport expansion would entail closure and cleanup of the site, including removal and disposal of stored hazardous wastes as well as decontamination and disposal of tanks and equipment. It also may be necessary to deal with contaminated soil and groundwater.

The Gary Municipal Airport Authority retained Havens and Emerson, Inc. as prime contractor for a study to assess the extent of the problems at the Conservation Chemical Company site, in order to guide their decisions regarding acquisition of that property and expenditure of airport development funds. The objectives were to identify hazardous materials stored on the site; to determine whether soil and groundwater contamination constitutes a problem; and to estimate the costs required for cleanup of the site.

GARY MUNICIPAL AIRPORT AUTHORITY

GARY, INDIANA

HAZARDOUS WASTE ASSESSMENT AT CONSERVATION CHEMICAL COMPANY

FINAL REPORT
August, 1983

HAVENS AND EMERSON

CONSULTING ENVIRONMENTAL ENGINEERS

CLEVELAND - ATLANTA - ST. LOUIS - BOSTON

GARY, INDIANA - SADDLE BROOK, N.J.

LIST OF FIGURES

LIST OF TABLES

GARY MUNICIPAL AIRPORT AUTHORITY
HAZARDOUS WASTE ASSESSMENT AT CONSERVATION CHEMICAL CO.

TABLE OF CONTENTS

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

PRELIMINARY ASSESSMENT

EXECUTIVE SUMMARY

TO: Colleen Hart, U.S. EPA
FROM: James Christensen, FIT
DATE: October 2, 1991
SUBJECT: Conservation Chemical Site, Gary, Indiana
IND040888992/F05-9104-057/FIN0047PA

The Conservation Chemical (CC) site is Highway, located at 6500 Industrial near the intersection of Industrial Highway and Highway 312. The CC site seems to have been abandoned since its latest owner, Conservation Chemical, ceased its industrial waste recycling operations sometime in the mid-1980s.

Prior to 1967, the site and its adjoining parcels were owned by Berry Petroleum Refinery. In 1967, Conservation Chemical began operations on-site. The primary activity of Conservation Chemical was the conversion of industrial waste into forms acceptable for disposal or reuse. The CC site stored and treated spent acid, oil, and solvents, and produced ferric chloride by reacting steel mill waste pickle liquor with chlorine.

One of the most significant features of the CC site is a 600,000-gallon surface impoundment that was used as a settling lagoon for disposal of hazardous materials. Annual quantities of 500 tons of sludge from lime treatment pickle liquor and 2,100 tons of slop oil emulsion solids from petroleum refining were disposed into this surface impoundment. Eruptions of gas bubbles from the surface of this basin were

reported by employees of Conservation Chemical. These eruptions may have occurred from gasses released by reactive materials; from underground containers, which were suspected to be buried on-site, that came in contact with water; or, they may have been caused by decomposition of putrescible material.

On December 22, 1981, it was discovered that over 16,000 gallons of waste solvents were suspected to have spilled onto the ground when a discharge nozzle on solvent tank 1S had broken. On December 23, 1981, a site inspection was performed by U.S. EPA and the Indiana State Board of Health. On December 24, 1981, General Drainage, a U.S. EPA contractor, pumped 3,000 gallons of waste that had not been cleaned up by Conservation Chemical into an empty storage tank on-site. Contaminated soil had been placed in 55-gallon drums. Soil samples contained methylene chloride, xylene, toluene, trichloroethene, 1,1,1-trichloroethane and methyl ethyl ketone.

A site inspection of the CC site was conducted by Ecology and Environment, Inc., (E & E) on October 18, 1983. Heavy metals, cyanide, and methylene chloride were found in upgradient and downgradient monitoring wells; high concentrations of PAHs were found in downgradient wells. Heavy metals and phenols were found in surface water; soil samples contained heavy metals, cyanides, and PAHs. On May 20, 1991, an off-site reconnaissance by E & E confirmed the presence of the surface impoundment on-site. Also observed was an empty 620,000-gallon tank with a large hole in the side, approximately ten 15,000-gallon storage tanks, and about 100 drums with stained soils nearby. A noticeable oil/solvent odor was also noted on this date.

The geology of the site consists of a highly permeable subsurface, a high water table and a strong downward gradient to the groundwater flow. Contaminants were found in both the upper and lower aquifer in the vicinity of the site. However, the nearest drinking water well is approximately 3 1/2 miles south of the site.

Contaminants originating on-site may have migrated through a railroad embankment and into a drainage ditch located on Gary Municipal Airport property. The airport is adjacent to the southeast boundary of the CC site. Airport employees have reported oily substances leaking

through the embankment and into the ditch. Stressed vegetation was also noted on the banks of this ditch. This drainage ditch runs south to a vetland are that is adjacent to the Grand Calumet River, where fishing occurs downstream of the site. Groundwater flow indicates that groundwater may eventually discharge into the Grand Calumet River. The Grand Calumet River flows west toward the Indiana Harbor Canal, which flows toward Lake Michigan only about 50% of the time due to water level fluctuations. It is unlikely that any contamination in Lake Michigan would be attributable to the CC site due to the 6 1/2 miles downstream distance to Lake Michigan and the reversal of flow of the Indiana Harbor Canal. The nearest surface water intake is located in Lake Michigan, 7 miles downstream of the site.

The site is poorly fenced and is accessible to anyone entering the site through the open gate at SES, or to anyone entering the site from the airport. A potential for volatilization and subsequent release to air of organic compounds is also a threat to nearby workers and residents.

DRAFT NOV 06 1990

STATE	EPA REGION
IND	040889912

SITE LOCATION

SITE NAME: Legal, common or descriptive name of site
CONSERVATION CHEMICAL

STREET ADDRESS, ROUTE or SPECIFIC LOCATION IDENTIFIER
6500 INDUSTRIAL HWY

CITY	STATE	ZIP CODE	TELEPHONE
GARY	IN	46406	( )

COORDINATES: LATITUDE and LONGITUDE
41°37'25" 87°25'20"

TOWNSHIP, RANGE, and SECTION
T 37N, R9W, NW¼NE¼, SEC 35

OWNER/OPERATOR IDENTIFICATION

OWNER	OPERATOR
CONSERVATION CHEMICAL	NORMAN B. HIERSTED
OWNER ADDRESS: 5201 JOHNSON DRIVE Suite 400	OPERATOR ADDRESS: P.O. Box 6066
CITY: MISSION	CITY: GARY
STATE: KS ZIP CODE: 66205 TELEPHONE: (913) 262-3649	STATE: IN ZIP CODE: 46406 TELEPHONE: (219) 949-8229

TYPE OF OWNERSHIP

- [x] PRIVATE
- [ ] FEDERAL: Agency name _____
- [ ] STATE
- [ ] COUNTY
- [ ] MUNICIPAL
- [ ] OTHER: _____
- [ ] NOT SPECIFIED

OWNER/OPERATOR NOTIFICATION ON FILE

- [x] NONE
- [ ] CERCLA 103 C, UNCONTROLLED WASTE SITE DATE: _____
- [ ] RCRA 3001 DATE: _____

SITE STATUS

- [ ] ACTIVE
- [x] INACTIVE
- [ ] UNKNOWN

YEARS OF OPERATION

BEGINNING YEAR: 1967
ENDING YEAR: UNKNOWN*
[x] UNKNOWN *ENDED BETWEEN 1986-1990

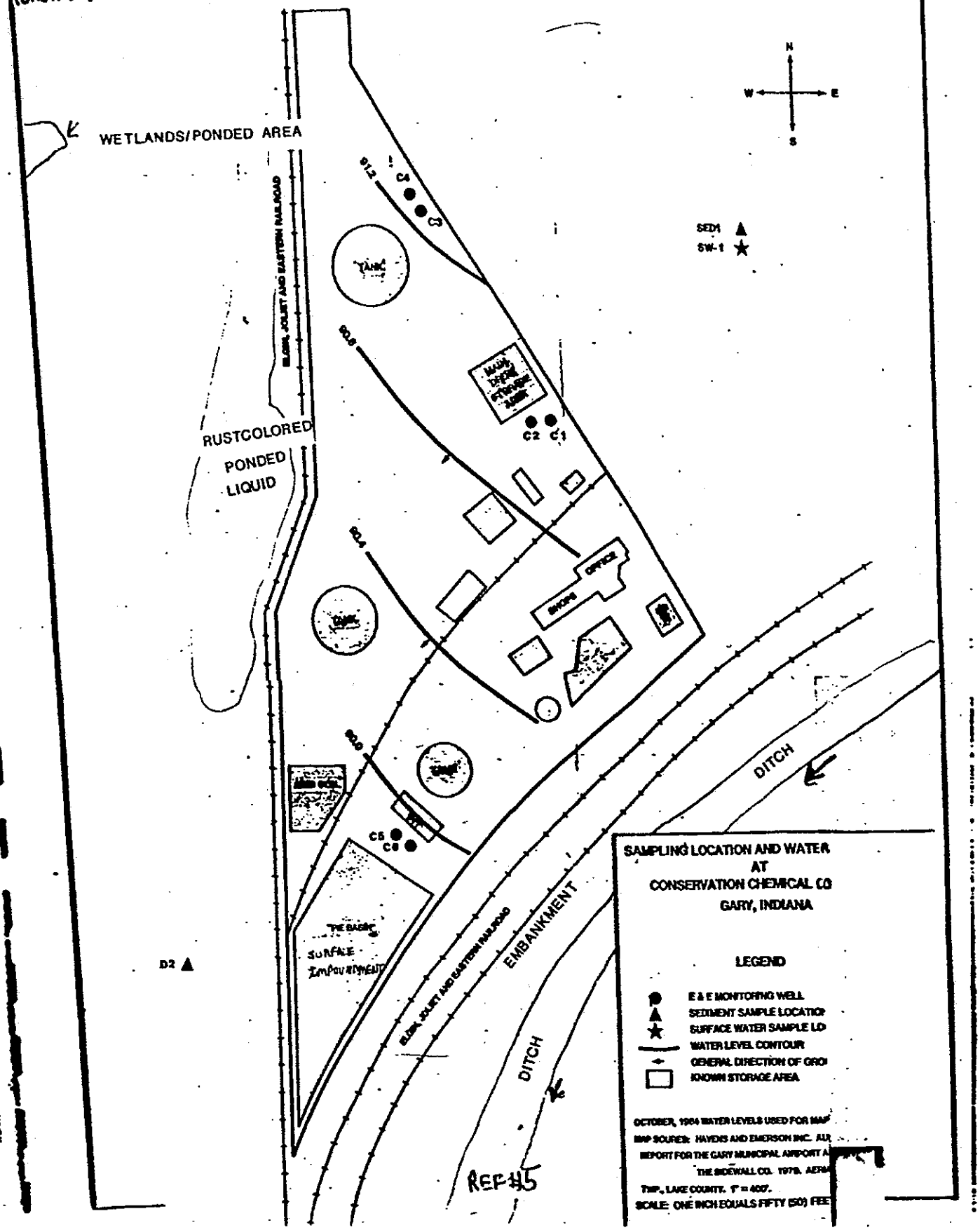
APPROXIMATE SIZE OF SITE

4.1 ACRES

SITE EVALUATION

AGENCY / ORGANIZATION: ECOLOGY AND ENVIRONMENT Inc/US EPA
INVESTIGATOR: JAMES CHRISTENSEN FIT
CONTACT: COLLEEN HART, US EPA 886-3009
ADDRESS: 111 W. JACKSON
TELEPHONE: (312) 663-9415
DATE: 5-28-91

Site Sketch:
(Show all pertinent features; indicate sources and closest targets)



Site Description and Operational History:

Conservation Chemical began operations in 1967. Prior to that the site and its adjoining parcels were owned by Berry Petroleum Refinery. The primary activity of Conservation Chemical was the conversion of industrial waste into forms acceptable for disposal or reuse. This site stores and treats spent acid, oil and solvents and produces Ferric Chloride by reacting steel mill waste pickle liquor with chlorine. Site features include a 600,000 gal surface impoundment, an empty 620,000 gal. tank with a large hole in the side, approximately ten 15,000 gal storage tanks, and about 100 drums with stained soils nearby. Some drums were reported to contain contaminants or contaminated soils. The surface impoundment was used as a settling lagoon for disposal of hazardous materials. Annual quantities of 500 tons of sludge from lime treatment pickle liquor and 2100 tons of slop oil emulsion solids from petroleum refining were disposed into this surface impoundment. Eruptions of gas bubbles from the surface of this basin were reported by employees of Conservation Chemical. These eruptions may occur from gasses released by reactive materials, in underground containers suspected to be buried on the site, upon contact with water; or they may be caused by decomposition of putrescible material.

On Dec. 22, 1981 it was discovered that over 16,000 gallons of waste solvents were suspected to have been spilled onto the ground when when a discharge nozzle on solvent tank 1S had broken. A site inspection was performed by the U.S. EPA and the Indiana State Board of Health on Dec. 23. On Dec. 24 General Drainage, a U.S EPA contractor pumped 3000 gallons of waste that had not been cleaned up by Conservation Chemical into an empty storage tank at the site. Contaminated soil had been placed in 55 gal. drums. Samples contained Methylene Chloride, Xylene, Tolulene, Trichloroethlene, 1,1,1 Trichloroethane and Methyl ethyl ketone. A site inspection was conducted by Ecology and Environment on Oct. 18, 1983. Heavy metals, cyanide and Methylene chloride were found in upgradient and downgradient monitoring wells, high concentrations of PAH's were found in downgradient wells. Heavy metals and phenols were found in surface water; soil samples contained heavy metals, cyanides and PAH's. A May 20, 1991 off-site reconnaissance by Ecology and Environment confirmed the presence of the tanks, drums, stained soils and the surface impoundment on the site. A noticable oil/solvent odor was also noted on this date.

Probable Contaminants of Concern:

Previous investigations; analytical data:

- ANALYSIS OF GROUND WATER SAMPLES IN MARCH OF 1983 INDICATED THE PRESENCE OF VOLATILE ORGANIC SOLVENTS CYANIDES (145 PPB), PHENOLS AND HEAVY METALS (LEAD 14,700 PPB), (CADMIUM 140 PPB), (CHROMIUM 46,000 PPB), (MANGANESE 91,500 PPB).
- ANALYSIS OF SURFACE WATER SAMPLES IN MARCH 1983 INDICATED HIGH LEVELS OF LEAD (3800 PPB), CADMIUM (7.3 PPB) AND MANGANESE (85 PPB) FOUND IN WETLANDS NORTHEAST OF THE SITE.
- SEDIMENT SAMPLES TAKEN NORTHEAST OFSITE INDICATED THE PRESENCE OF CHROMIUM (600 PPB) LEAD (1240 PPB) AND MANGANESE (860 PPB) AND HIGH CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS.
- SEDIMENT SAMPLES TO THE WEST OF THE SITE HAD HIGH CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS AND LEAD
- ANALYSIS OF GROUND WATER SAMPLES DOWNGRADIENT FROM THE SITE (SOUTH) INCLUDED HIGH CONCENTRATIONS OF ACETONE (3000 PPB), 4METHYL-2PENTANONE, METHYLENE CHLORIDE (1800 PPB), TOLUENE, TOTAL XYLENES AND OTHER VOLATILE ORGANICS. HEAVY METALS AND CYANIDE WERE ALSO DETECTED IN GROUND WATER SAMPLES

P 1X

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

M E M O R A N D U M

TO: Colleen Hart, U.S. EPA
FROM: James Christensen, FIT
DATE: October 2, 1991
SUBJECT: Conservation Chemical Site, Gary, Indiana
IND040888992/F05-9104-057/FIN0047PA

On May 20, 1991, Ecology and Environment, Inc., Field Investigation Team (FIT) conducted an off-site reconnaissance inspection of the Conservatin Chemical. FIT confirmed the presence of drums, stained soils, tanks, and the (CC) surface impoundment on-site. The CC site is accessible to the public through the gate at SES and through broken areas of the fence that bounds the site. Contaminants were present at previous CC site inspections and there is no evidence that any removal actions have occurred. A potential exists for these contaminants to migrate to nearby surface water and also through the air. Therefore, FIT recommends a high priority site inspection of the CC site, especially since many drums with unknown contents and stained soils were observed.

7427:3

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

INDIANAPOLIS

OFFICE MEMORANDUM

November 14, 1991

DATE:

TO: File

THRU:

FROM: John P. Naddy JPN
Site Investigation Section

SUBJECT: Conservation Chemical Site
Gary, Indiana
IND040888992

Staff of the Office of Environmental Response, Site Investigation Section, have reviewed the Focused Site Inspection Prioritization Review (FSIPR) of the above mentioned site and have the following comment:

The sensitive environments should be supplied by the U.S. Fish and Wildlife Service or by the Indiana Department of Natural Resources and documented as such.

The State concurs with the findings of the Ecology & Environment report. The State recommends a high priority site inspection of the site.

ERRIS EXECUTIVE SUMMARY

Wang Sequence # _____ WINDSHIELD SURVEY ___YES _X_NO
EPA ID# IND040888992
Original Company Name: Conservation Chemical Company

Revised Company Name: _____

Alias Names: _____

Original _X_ Address: 6500 Industrial Highway
Corrected ___ Gary, IN 46406
Lake County

___ Landfill ___ Generator _X_ Treatment, Storage, Disposal (TSD)
___ Transporter ___ Other: _____

PRIORITY ASSESSMENT: _X_HIGH ___MEDIUM ___LOW ___NO FURTHER ACTION (NONE)

CLASS:
___I-STATE LEAD _X_II-REM/FIT LEAD State Accompanies FIT ___III-REM/FIT LEAD Limited On-site State Involvement ___IV OTHER: _____

==========

Priority Justification and State Comments Regarding:
_X_PA ___SI ___Follow-up SI ___RPS ___HRS

Surface water and groundwater contamination has been documented at this site. Activities at the facility include waste neutralization, solvent recovery, and temporary storage. A site inspection was recently completed by Ecology & Environment.

STATE INVOLVEMENT

_C_ Preliminary Assessments _R_ Site Inspection _R_ Follow-up Site Inspection
_R_ Responsible Party Search _R_ Hazard Ranking System (HRS)

* COMPLETE DOCUMENTS (C) REVIEW DOCUMENTS (R)

Prepared by: Rich Molini RM Phone: (317) 243-5133 Date: 7/1/85
Activity Time: 10 Hours

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: IND | 02 SITE NUMBER: 040888992

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION | 02 ☐ OBSERVED (DATE: _____) | ☐ POTENTIAL | ☒ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

The ccc site is situated on the shallow Calumet aquifer. All lagoons, spills, waste piles, discharge contaminants to this shallow sand and gravel aquifer. Analysis of groundwater samples showed detectable concentrations of chlorinated organics, cyanides, phenols, and heavy metals.

01 ☐ B. SURFACE WATER CONTAMINATION | 02 ☐ OBSERVED (DATE: _____) | ☐ POTENTIAL | ☒ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

The Calumet aquifer discharges locally into the Grand Calumet River and Little Calumet River and regionally into Lake Michigan. Excessive acidity has been noted in surface water on ccc property.

01 ☐ C. CONTAMINATION OF AIR | 02 ☐ OBSERVED (DATE: _____) | ☐ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

N/A

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS | 02 ☐ OBSERVED (DATE: _____) | ☐ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

N/A

01 ☐ E. DIRECT CONTACT | 02 ☐ OBSERVED (DATE: _____) | ☐ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

N/A

01 ☐ F. CONTAMINATION OF SOIL | 02 ☐ OBSERVED (DATE: _____) | ☐ POTENTIAL | ☒ ALLEGED
03 AREA POTENTIALLY AFFECTED: 80 (Acres) | 04 NARRATIVE DESCRIPTION

Low local relief permits surface runoff to spread over a relatively large geographical area. The company was cited for soil contamination. 23 March 1973 by ISBH.

01 ☐ G. DRINKING WATER CONTAMINATION | 02 ☐ OBSERVED (DATE: _____) | ☒ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

Much of the contaminated groundwater may eventually discharge into Lake Michigan, the principle water supply for all the lake border communities.

01 ☐ H. WORKER EXPOSURE/INJURY | 02 ☐ OBSERVED (DATE: _____) | ☐ POTENTIAL | ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

N/A

01 ☐ I. POPULATION EXPOSURE/INJURY | 02 ☐ OBSERVED (DATE: _____) | ☐ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

N/A

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IND	040888992

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

☐ A. SOLID ☐ E. SLURRY
☐ B. POWDER, FINES ☐ F. LIQUID
☐ C. SLUDGE ☐ G. GAS
☐ D. OTHER _____ (Specify)

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS _____
CUBIC YARDS _____
NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

☒ A. TOXIC ☐ E. SOLUBLE ☒ I. HIGHLY VOLATILE
☒ B. CORROSIVE ☐ F. INFECTIOUS ☐ J. EXPLOSIVE
☐ C. RADIOACTIVE ☐ G. FLAMMABLE ☒ K. REACTIVE
☒ D. PERSISTENT ☐ H. IGNITABLE ☐ L. INCOMPATIBLE
☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE	unknown		
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS	unknown		
IOC	INORGANIC CHEMICALS	unknown		
ACD	ACIDS	unknown		
BAS	BASES			
MES	HEAVY METALS	unknown		

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
ACD	HCL	7647-01-0			
	H_2SO_4	7444-93-9			
	HF	7664-39-3			
	ANO_3	7497-37-2			
OCE	Phenols	108-95-2			
	Cyanides				
MES	CR	7440-47-3			
IOC	CuCl	7447-39-4			
	NH_4SO_4				

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

1. ISBH files ccc Generator files
2. ISBH files 8/83 Havens & Emerson Report

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: IND | 02 SITE NUMBER: 040888992

II. HAZARDOUS CONDITIONS AND INCIDENTS *(Continued)*

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION *(Include name(s) of species)*

N/A

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES *(Spills/runoff/standing liquids/leaking drums)* — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Surface impoundments still present. The impoundments contain sludges similar to sludges found in process tanks on the property.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

Ground eruptions have occurred at the site. The eruptions have been attributed to possible buried reactive wastes or putrescible organic solids.

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

V. SOURCES OF INFORMATION *(Cite specific references, e. g., state files, sample analysis, reports)*

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IND	040888992

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Conservation Chemical Co.	6500 Industrial Highway

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Gary	IN	46406	Lake	89	1

09 COORDINATES LATITUDE	LONGITUDE	
41° 37' 25"	87° 25' 20"	Gary Quad

10 DIRECTIONS TO SITE (Starting from nearest public road)

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)
Conservation Chemical Co.	5201 Johnson Drive, Suite 400

03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Mission	KS	66205	(913) 262-3649

07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)
Same	

09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
			( )

13 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
☐ A. RCRA 3001 DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☒ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
☒ YES DATE 8/25/83 (MONTH DAY YEAR)
☐ NO

BY (Check all that apply)
☒ A. EPA ☒ B. EPA CONTRACTOR ☒ C. STATE ☒ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)
CONTRACTOR NAME(S): Havens and Emerson, Ecology & Environment

02 SITE STATUS (Check one)	03 YEARS OF OPERATION		
☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN	1969 (BEGINNING YEAR)	present (ENDING YEAR)	☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

cyanides	spent ammonium perfulfate	waste oil
hex chromium	spent chromic acid	hydrochloric acid
spent sulfuric acid	mixed acids	heavy metals
		solvents

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

Surface and groundwater contamination as a result of use of lagoons, pits, and waste piles, and accidental spills on the property.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
☐ A. HIGH (Inspection required promptly) ☒ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NUMBER
Harry Atkinson HA	Indiana State Board of Health	(317) 243-5132

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Rich Molini RM	ISBH	LPC	(317) 243-5133	6/20/85 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

FOCUSED SITE INSPECTION PRIORITIZATION REPORT
CONSERVATION CHEMICAL COMPANY
GARY, INDIANA
LAKE COUNTY
IND040888992

November 1994

This document was prepared in accordance with U.S. EPA Contract No. 68-W8-0089, WESTON Region V Alternative Remedial Contracting Strategy (ARCS).

Work Assignment No.: 48-5JZZ/FSIP Document Control No.: 4500-48-AKCD

FOCUSED SITE INSPECTION PRIORITIZATION REPORT
CONSERVATION CHEMICAL COMPANY
GARY, INDIANA
LAKE COUNTY
IND040888992

Roy F. Weston, Inc. (WESTON®) was tasked by the United States Environmental Protection Agency (U.S. EPA) to conduct a focused site inspection prioritization (FSIP) of the Conservation Chemical Company site under Contract Number 68-W8-0089 and work assignment number 48-5JZZ.

The site was initially evaluated in the form of a Preliminary Sampling Investigation (PSI). The PSI was conducted by Ecology and Environment, Inc. (E&E) in November 1983, and the PSI report was submitted to the U.S. EPA on 14 May 1984.

SITE INVESTIGATION NEEDS FOR CERCLIS-LISTED SITES

The purpose of assessment of sites listed in the Comprehensive Environmental Response Compensation Liability Information System (CERCLA) data base is to determine whether these sites are candidates for inclusion in the National Priority List (NPL). This determination is made using the Hazard Ranking System (HRS). Any site eligible for placement in the NPL must at least have an overall score of 28.50. Additional investigations in the form of Screening Site Inspection (SSI) and/or Expanded Site Investigation (ESI) are conducted for those sites whose preliminary HRS Score is greater than 28.50. The site is scored or re-scored after SSI and/or ESI to determine its eligibility for placement in NPL.

The goal of a Focused Site Inspection Prioritization (FSIP) is to gather any additional information necessary, following the completion of the SSI (prior to the implementation of the revised HRS), to help set priorities among sites for NPL listing or to screen them from further Superfund attention. FSIPs can be performed on sites that have SSI completion dates prior to August 1, 1992 in CERCLIS, for these sites were most likely not evaluated using the revised HRS model. The FSIPs are conducted using the revised HRS model,

which was promulgated and published in the Federal Register (55 FR 51532) in December 1990 and which supersedes the original HRS.

If the existing information supports the determination that additional investigation is not necessary, the site is designated as requiring no further remedial action (NFRAP). Sites can also be NFRAPed without scoring if the following conditions exist:

- No waste is present at the site.
- Site at which the only known or suspected releases to the environment are due to petroleum products.
- Site is regulated under RCRA.

SITE LOCATION

The Conservation Chemical Company site is located at 6500 Industrial Highway (U.S. Route 12) in Gary, Lake County, Indiana. The triangular shaped, 4.1-acre site is located in a predominately industrial area. The site is bounded on the north by the Western Scrap Superfund site, on the east by the Gary Municipal Airport, and on the south and west by the Elgin, Joliet and Eastern railroad spur. A site location and site features maps are presented in Figures 1 and 2, respectively.

SITE DESCRIPTION

The Conservation Chemical Company was an inactive industrial waste treatment facility which converted spent acid, oil and solvents into forms which were either acceptable for reuse or disposal. The Conservation Chemical Company was also a ferric chloride production facility. The spent waste pickling liquor generated by the steel mill industry in the surrounding area was used for producing ferric chloride. The ferric chloride production process involved the reaction of ferrous chloride pickling liquor with chlorine and scrap iron. The ferrous chloride pickling liquor was concentrated by thermal evaporation and air

oxidized. Chlorine was reacted with the ferrous chloride and in the presence of additional chlorine atoms produces ferric chloride. Scrap iron was added to increase the concentration of the ferric chloride and to remove the free acidity by conversion to iron salts.

The principal structural features at the Conservation Chemical Company site were the office/shop buildings, three large storage tanks, two concrete lined pits, a distillation column (tower), and a forced-draft cooling tower. In addition, 53 smaller storage tanks and a number of process units and small structures were located within a 250-foot radius from the office\shop building and approximately 300 drums were located at the main drum storage area and at other locations scattered around the site. A pie shaped basin located at the southern apex of the triangular site and two pits located to the southwest of the railroad spur were also present at the site.

SITE HISTORY

The Conservation Chemical Company site began operations in 1967. Prior to 1967, the Conservation Chemical Company site was owned by Berry Oil Company which operated as an oil refinery. Most of the waste oils on site were abandoned by the refinery operation. Tanks and drums abandoned by the Berry Oil Company were utilized by the Conservation Chemical Company. In 1967, Norman Hjersted purchased the facility and operated the facility as a ferric chloride producer. In 1975, the company ceased ferric chloride production and began operations as a hazardous waste terminal and treatment facility for cyanide, organic solvents, plating wastes, and waste oils. Regulations in 1980 foreed Conservation Chemical Company to stop the transport of hazardous wastes. The plant was redesigned at this time for the production of ferric chloride.

In 1983, the Gary Municipal Airport Authority retained Havens & Emerson, Inc. to conduct a hazardous waste assessment at Conservation Chemical Company for possible acquisition of the property for airport expansion. Havens & Emerson, Inc. identified several areas of

concern and provided the Gary Municipal Airport Authority with a cost estimate to remediate the site.

In February 1984, the Technical Assistance Team (TAT) conducted a site assessment and identified several imminent threats to human health and the environment. On 27 September 1985, the U.S. EPA issued an Administrative Order, which required the Conservation Chemical Company to remove and dispose of hazardous waste from the Conservation Chemical Company site. The Conservation Chemical Company continued to produce ferric chloride until the Conservation Chemical Company was directed by the U.S. EPA to ceased production on 19 December 1985. During March and August 1990, the removal activities at the site included the removal of asbestos wrapping from the pipes and cyanide contaminated debris from the cracking tower, respectively. Other removal actions may have occurred at the site.

PRIOR INVESTIGATIONS

Investigation by U.S. EPA

A Preliminary Sampling Investigation (PSI) was conducted by Ecology & Environment, Inc. (E&E) in November 1983. During the PSI, three sets of monitoring wells (C1 and C2, C3 and C4, and C5 and C6) were installed at the Conservation Chemical Company site. Each set of monitoring wells included a shallow (C2, C4, and C6) and deep (C1, C3, and C5) monitoring well. Two sediment samples (SED 1 and SED 2) and one surface water sample (SW-1) were also collected off-site during the PSI. Sampling locations are provided in Figure 3. The general direction of groundwater flow is to the southwest. No soil/waste samples were collected to characterize any on-site sources.

Analytical results from the monitoring well samples documented a release of contamination to groundwater. The results also indicated the presence of semivolatile organic compounds (SVOCs), volatile organic compounds (VOCs), and metals at concentrations greater than

three times the background monitoring well samples (C3 and C4) or above the CRDL/SQL if the compound was not detected in the background monitoring well sample. A key analytical findings of the PSI monitoring well sampling are presented in Table 1.

Investigation by PRPs

On 28 March 1990, PRPs collected samples from four PRP installed monitoring wells. Analytical results from PRP monitoring well samples documented a release of contaminations to the groundwater. Sampling locations are provided in Figure 4. The results indicated the presence of VOCs, SVOCs, and metals at concentrations greater than three times the background monitoring well samples or above the SQL if the compound was not detected in the background monitoring well samples. A key analytical finding table for the PRP monitoring well sampling is provided in Table 2.

ADDITIONAL SITE INFORMATION

All communities within the 4-mile target distance limit receive their drinking water from surface water intakes in Lake Michigan. No known municipal wells or private wells are located within the 4-mile target distance limit from the site. Table 3 summaries the population relying on the surface water intakes within 15-miles of the site.

No residential population or workers are present at the site because the facility ceased operations. The population within 4 miles is 35,024, as shown in Table 4. No terrestrial sensitive environments are present at the site.

SUMMARY

The site is currently undergoing remedial action under an administrative order between the PRPs and U.S. EPA. There are no residential or municipal wells located within 4-mile of

the site and no overland flow to the nearby surface water body. Therefore, no sampling was performed during the FSIP.

Table 1

Key Analytical Findings Table for PSI Monitoring Well Sampling[1]
Conservation Chemical Company
Gary, Indiana

Sample ID	Sampling Location	Units	Compound/Analyte	Sample Concentration	Background Concentration (C3/C4)
C1	Northeast Section	µg/L	Acetone	930	130
		µg/L	2-Butanone	140	<5
		µg/L	1,2-Dichloroethane	66	<1
		µg/L	4-Methyl-2-pentanone	37	<5
		µg/L	Methylene chloride	4,800	12
		µg/L	1,4-Dioxane	70	16
		µg/L	Aluminum	66,200	13,200
		µg/L	Antimony	1,730	<60
		µg/L	Arsenic	1,490	66
		µg/L	Beryllium	20	5
		µg/L	Cadmium	140	19
		µg/L	Cobalt	3,930	380
		µg/L	Manganese	7,460	1,860
		µg/L	Nickel	8,580	330
		µg/L	Selenium	410	<5
		µg/L	Silver	45	<10
		µg/L	Tin	1,410*	40*
		µg/L	Vanadium	490	<50
		µg/L	Zinc	36,200*	10,940
C2	Northeast Section	µg/L	Benzene	430	<5
		µg/L	1,1-Dichloroethane	310	8
		µg/L	1,2-Dichloroethane	19	<1
		µg/L	Methylene chloride	75*	12*
		µg/L	Total xylenes	50	6
		µg/L	trans-1,2-Dichloroethene	34	<5
		µg/L	1,1,1-Trichloroethane	130	<5
		µg/L	Trichloroethene	140	<5
		µg/L	2-Methylphenol	16	<5

Table 1

Key Analytical Findings Table for PSI Monitoring Well Sampling[1]
Conservation Chemical Company
Gary, Indiana
(Continued)

Sample ID	Sampling Location	Units	Compound/Analyte	Sample Concentration	Background Concentration (C3/C4)
C2	Northeast (cont.)	µg/L	4-Methylphenol	104	<5
		µg/L	bis(2-Chloroethylene)	45	<5
		µg/L	4,4-DDD	11.9	<5
		µg/L	Antimony	22	<60
		µg/L	Arsenic	220	66
		µg/L	Barium	920	140
		µg/L	Cadmium	81	19
		µg/L	Lead	8,640	306
		µg/L	Manganese	5,150	1,860
		µg/L	Mercury	0.4	<0.2
		µg/L	Selenium	5	<5
		µg/L	Silver	14	<10
		µg/L	Vanadium	580	<50
		µg/L	Tin	69*	<10
C5	Southern Section	µg/L	Isophorone	3,422	<10
		µg/L	Acetone	6,800	130
		µg/L	2-Butanone	2,400	<5
		µg/L	1,1-Dichloroethane	1,800	8
		µg/L	1,2-Dichloroethane	880	<1
		µg/L	4-Methyl-2-pentanone	4,800	<5
		µg/L	Methylene chloride	4,800	12*
		µg/L	Toluene	950	<5
		µg/L	1,1,1-Trichloroethane	6,700	<5
		µg/L	1,1,2-Trichloroethane	2,200	<5
		µg/L	Trichloroethene	13,000	<5
		µg/L	Barium	660	140
		µg/L	Cobalt	1,390	380

Table 1

Key Analytical Findings Table for PSI Monitoring Well Sampling[1]
Conservation Chemical Company
Gary, Indiana
(Continued)

Sample ID	Sampling Location	Units	Compound/Analyte	Sample Concentration	Background Concentration (C3/C4)
C5	Southern (cont.)	µg/L	Iron	296,000	42,200
		µg/L	Manganese	5,630	1,860
		µg/L	Nickel	4,380	330
		µg/L	Silver	16	<10
		µg/L	Zinc	116,200[a]	10,940
C6	Southern Section	µg/L	Isophorone	346	<10
		µg/L	Acetone	30,000	130
		µg/L	Benzene	950	<5
		µg/L	2-Butanone	4,400	<5
		µg/L	Carbon disulfide	13	<1
		µg/L	Chloroform	210	<5
		µg/L	1,1-Dichloroethane	250	8
		µg/L	1,2-Dichloroethane	280	<1
		µg/L	1,1-Dichloroethene	50	<5
		µg/L	Ethylbenzene	250	<5
		µg/L	2-Hexanone	54	<5
		µg/L	4-Methyl-2-Pentanone	2,200	<5
		µg/L	Methylene chloride	3,600	12
		µg/L	Toluene	350	<5
		µg/L	Xylenes	420	6
		µg/L	trans-1,2-Dichloroethene	45	<5
		µg/L	1,1,1-Trichloroethane	1,900	<5
		µg/L	1,1,2-Trichloroethane	500	<5
		µg/L	Trichloroethene	2,100	<5
		µg/L	Antimony	130	<60
		µg/L	Arsenic	340	66
		µg/L	Cadmium	110	19

Table 1

Key Analytical Findings Table for PSI Monitoring Well Sampling[1]
Conservation Chemical Company
Gary, Indiana
(Continued)

Sample ID	Sampling Location	Units	Compound/Analyte	Sample Concentration	Background Concentration (C3/C4)
C6	Southern (cont.)	µg/L	Chromium	46,000	1,310
		µg/L	Cobalt	6,520	380
		µg/L	Cyanide	0.02	<10
		µg/L	Iron	956,000	42,200
		µg/L	Lead	14,700	306
		µg/L	Manganese	91,500	1,860
		µg/L	Nickel	21,900	330
		µg/L	Selenium	24	<5
		µg/L	Silver	35	<10

[1]Ecology & Environment, Inc., "Preliminary Sampling Investigation," 14 May 1984.
*Highest concentration detected in C_3 or C_4 was used.
C - Corrected value.

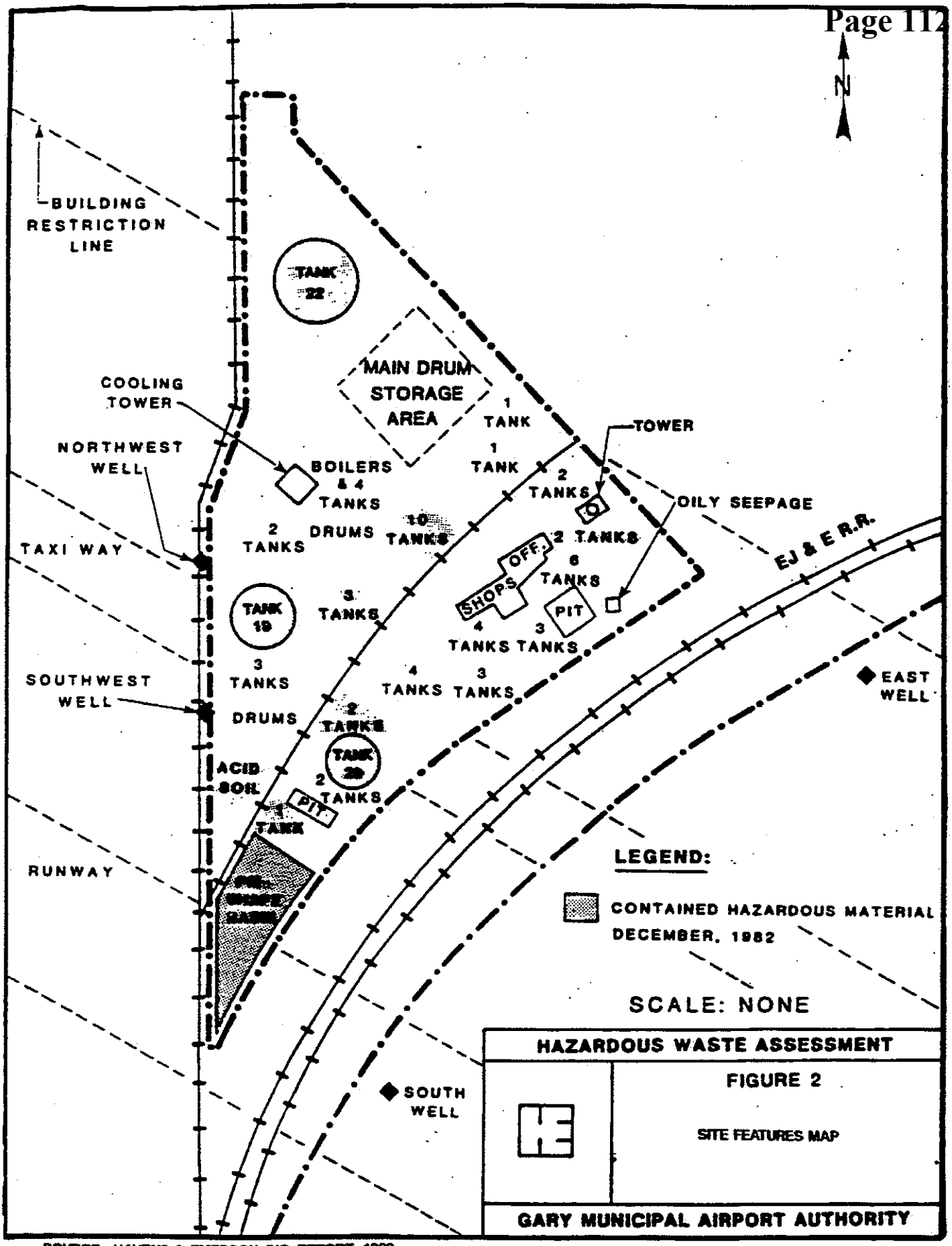
Table 2

Key Analytical Findings Table for PRP Monitoring Well Sampling[1]
Conservation Chemical Company
Gary, Indiana

Sample ID	Sampling Location	Units	Compound/Analyte	Sample Concentration	Background Concentration (C3/C4)
ERS-1	West Section (center)	mg/L	Arsenic	.001	<.001
		mg/L	Barium	.049	.060
		mg/L	Chromium	.014	<0.001
		µg/L	Benzene	216	3.3
		µg/L	Chloroethane	41.0	<10
		µg/L	1,1-Dichloroethane	167.0	<5
		µg/L	1,2-Dichloroethane	155.0	<5
		µg/L	1,1-Dichloroethene	65.3	<5
		µg/L	cis-1,2-Dichloroethene	206.0	<5
		µg/L	trans-1,2-Dichloroethene	16.5	<5
		µg/L	1,1,1-Trichloroethane	370.0	<5
		µg/L	Trichloroethene	1,390.0	<5
		µg/L	Vinyl chloride	25.0	<5
ERS-2	Southwest Section	mg/L	Cyanide	.084	.014
		mg/L	Arsenic	.001	<.001
		mg/L	Chromium	.013	<.001
		µg/L	1,2-Dichloroethane	2.7	<5
ERS-3	Southeast Section	mg/L	Arsenic	.004	<.001
		mg/L	Chromium	.016	<.001
		µg/L	Benzene	165.0	3.3
		µg/L	Chloroethane	74.4	<5
		µg/L	1,1-Dichloroethane	210.0	<5
		µg/L	1,2-Dichloroethane	458.0	<5
		µg/L	1,1-Dichloroethene	20.8	<5
		µg/L	Ethylbenzene	5.7	<5
		µg/L	Trichloroethene	1.1	<5
		µg/L	Vinyl chloride	59.2	<5
		µg/L	Xylene	6.6	<5

[1]Analytical results from PRP monitoring well sample as reported in the 6 November 1990 TAT letter report.

Note: Laboratory data sheets were not available and detection limits were not included with the compound/analytes where concentrations were below the detection limit; therefore, the CRDL was used in the background concentrations were a detection limit was not provided.



SOURCE: HAVENS & EMERSON, INC. REPORT, 1983

Table 3

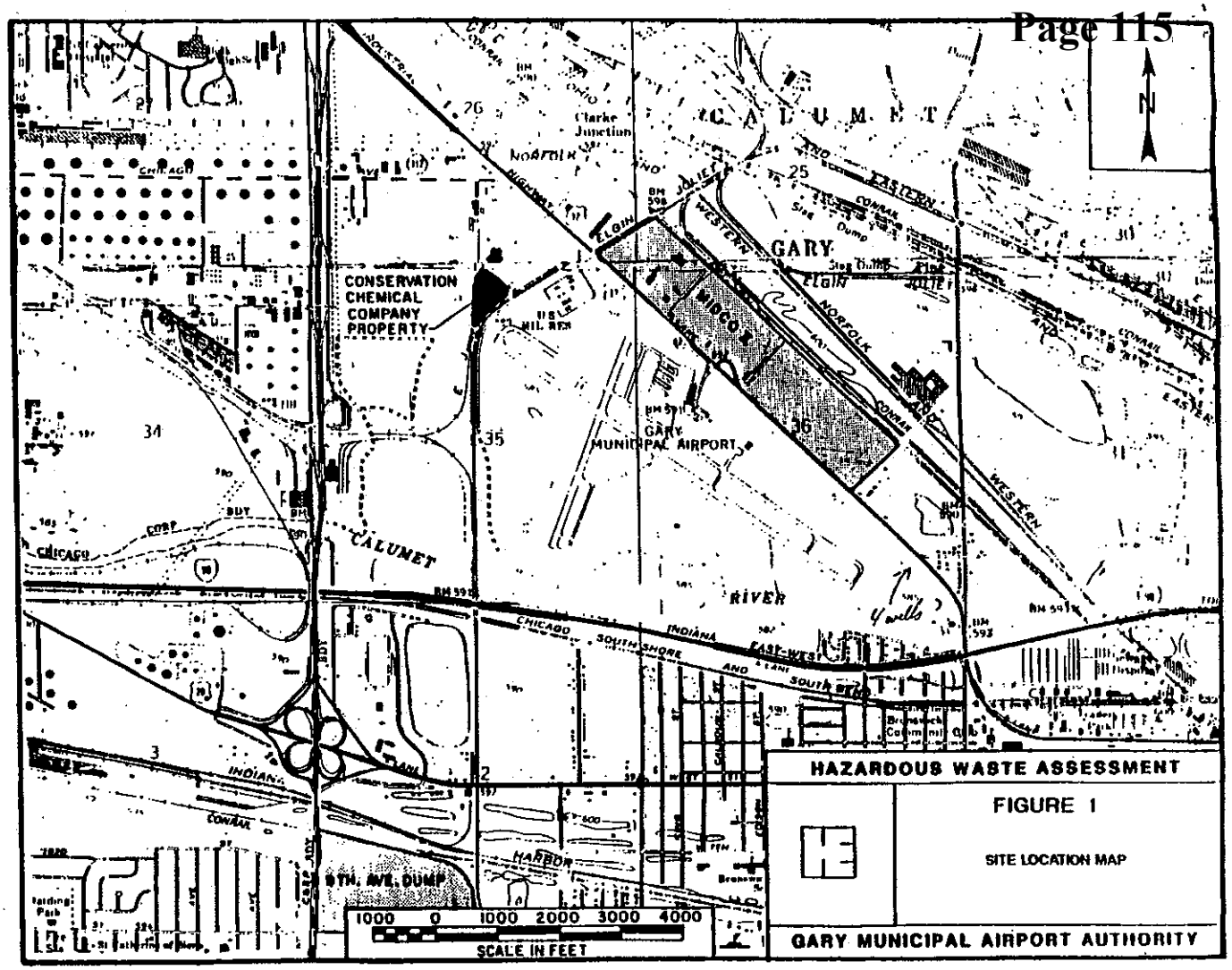
Populations Utilizing Surface WAter Intakes Within 15 Miles Downstream from the Site Conservation Chemical Company Gary, Indiana

Intake	Distance Downstream (Miles)	Communities Served	Total Population Served
Amoco Oil (Whiting)	10.30	Whiting	5,155
East Chicago	11.40	East Chicago	33,723
Hammond	12.21	Hammond, Lansing, Munster, Black Oak Township, Dyer, Chicago Heights, Thornton, Glenwood, Highland, Calumet City	249,594

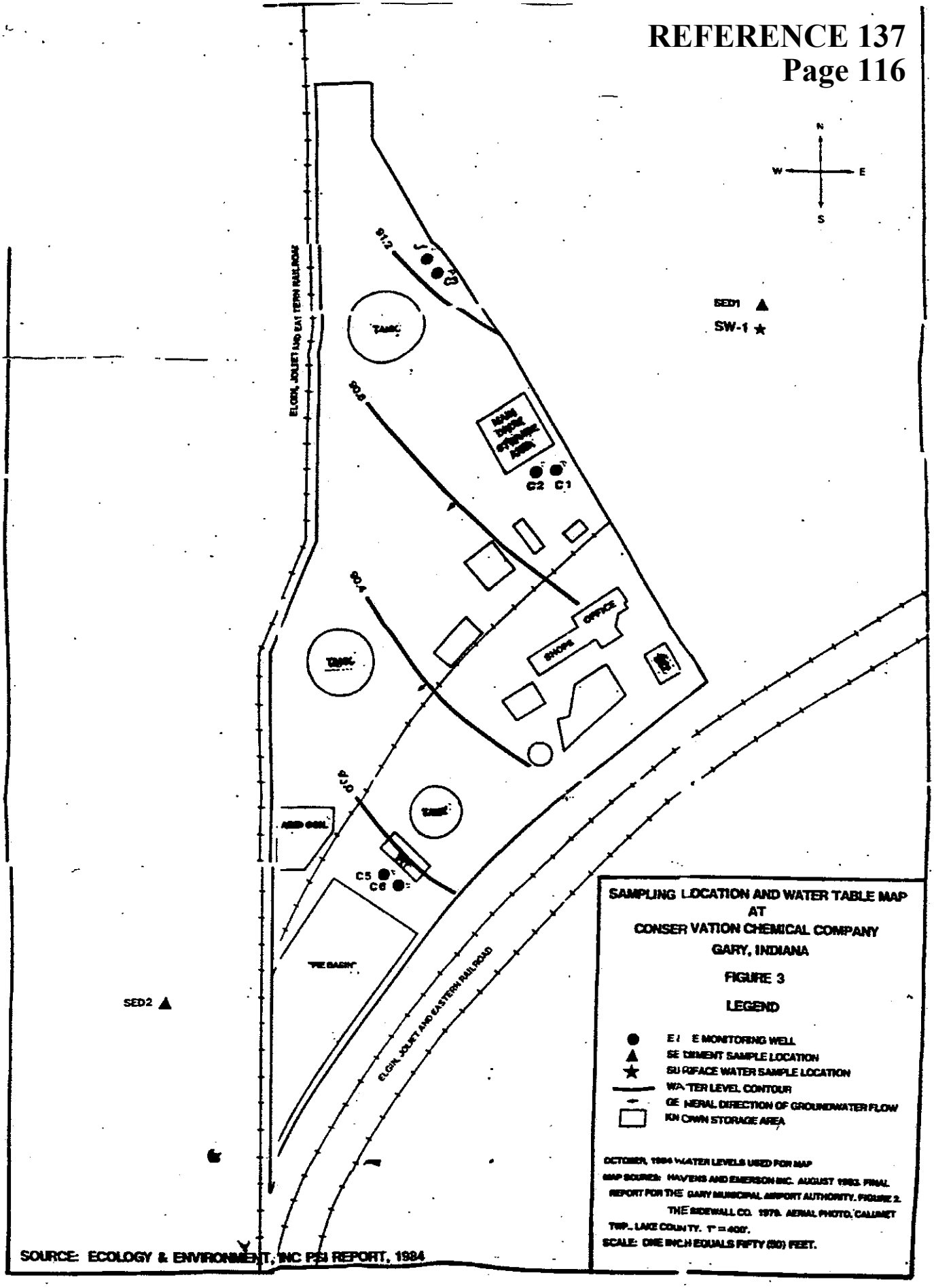
Table 4

Populations Within 4 Miles
Conservation Chemical Company
Gary, Indiana

Distance (Miles)	Population
0-1/4	6
1/4-1/2	23
1/2-1	48
1-2	5,396
2-3	10,904
3-4	18,647
Total	35,024



SOURCE: HAVENS & EMERSON INC REPORT, 1983



SAMPLING LOCATION AND WATER TABLE MAP
AT
CONSERVATION CHEMICAL COMPANY
GARY, INDIANA

FIGURE 3

LEGEND

- MONITORING WELL
- SEDIMENT SAMPLE LOCATION
- SURFACE WATER SAMPLE LOCATION
- WATER LEVEL CONTOUR
- GENERAL DIRECTION OF GROUNDWATER FLOW
- KNOWN STORAGE AREA

OCTOBER, 1984 WATER LEVELS USED FOR MAP

MAP SOURCE: HAVENS AND EMERSON INC. AUGUST 1983. FINAL REPORT FOR THE GARY MUNICIPAL AIRPORT AUTHORITY. FIGURE 2. THE SIDEWALL CO. 1978. AERIAL PHOTO, CALUMET TWP., LAKE COUNTY. 1" = 400'.

SCALE: ONE INCH EQUALS FIFTY (50) FEET.

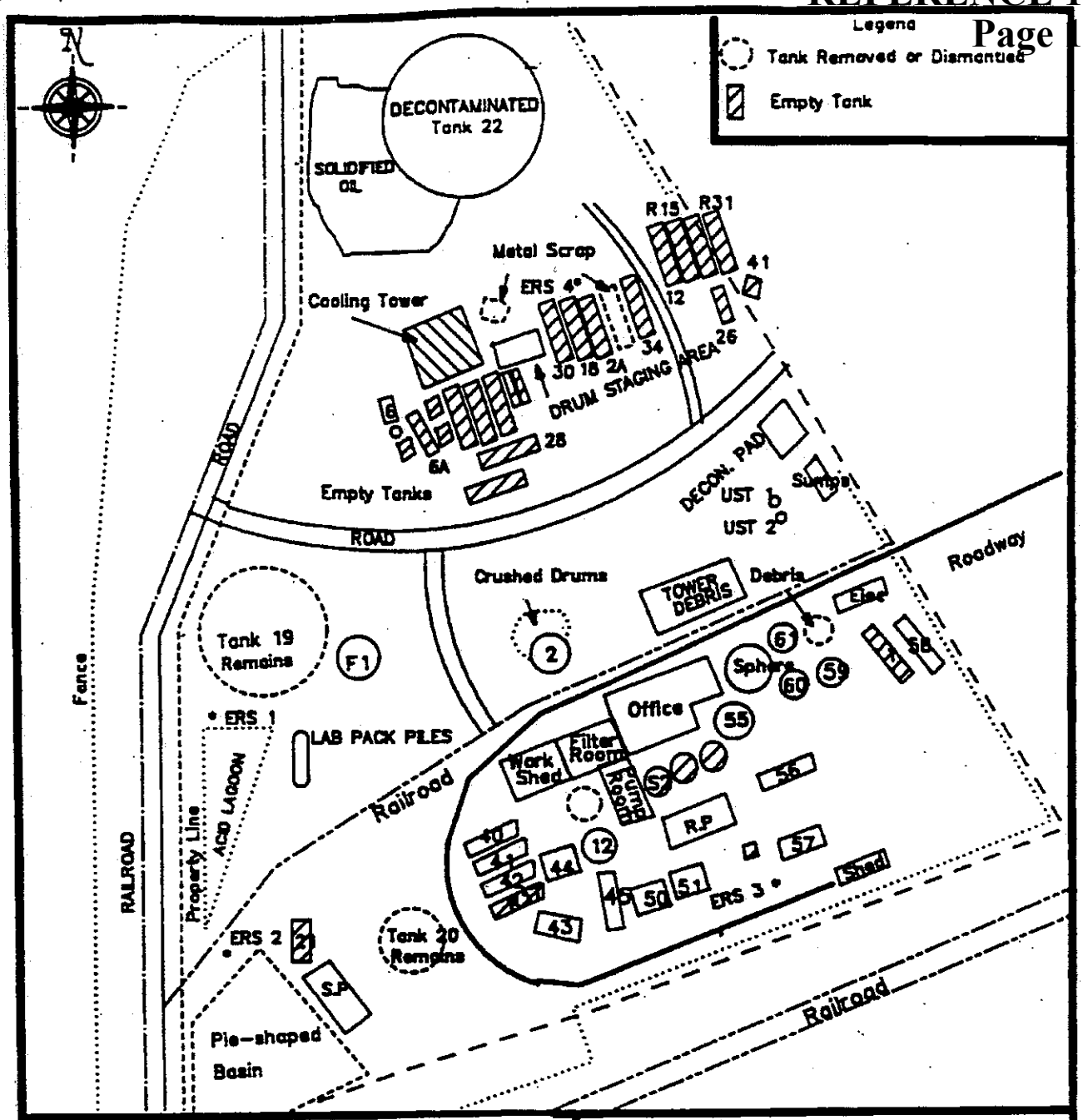


FIGURE 4

CONSERVATION CHEMICAL

GARY, INDIANA

NOT TO SCALE

WESTON
MANAGERS DESIGNERS/CONSULTANTS

PRP MONITORING WELL LOCATION MAP